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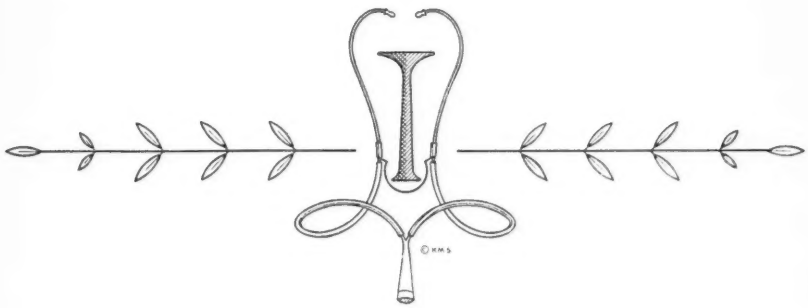

JUNE 1936

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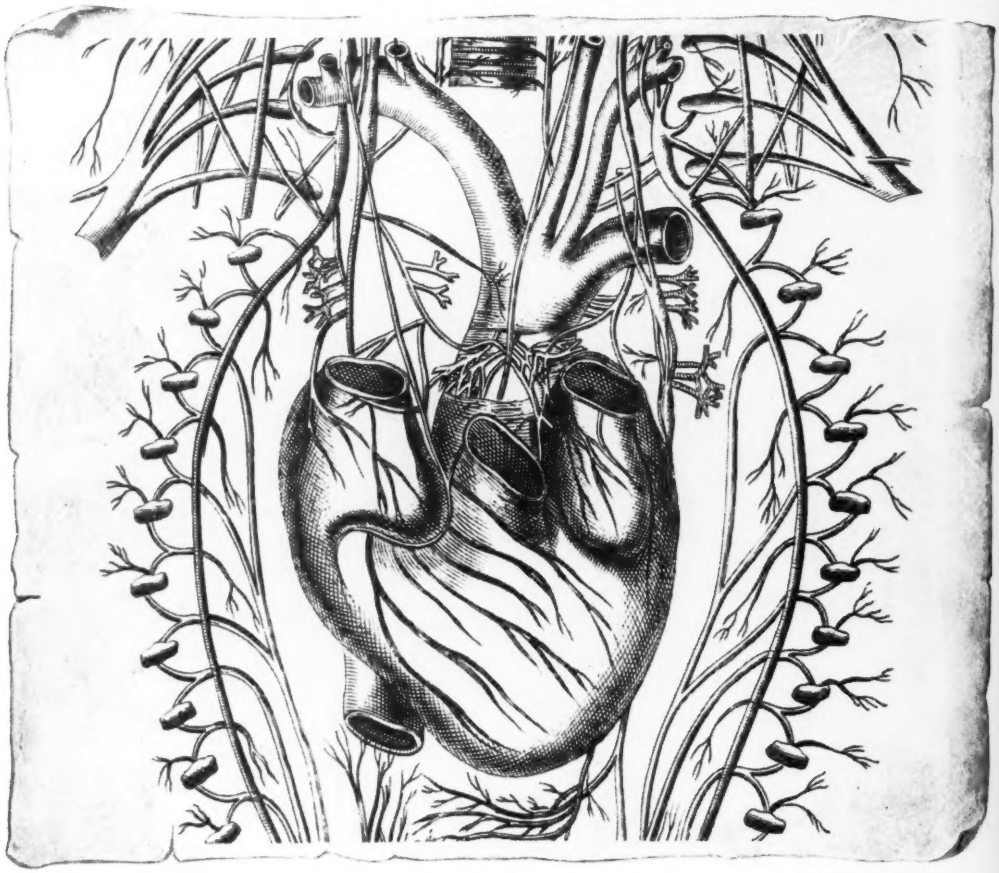

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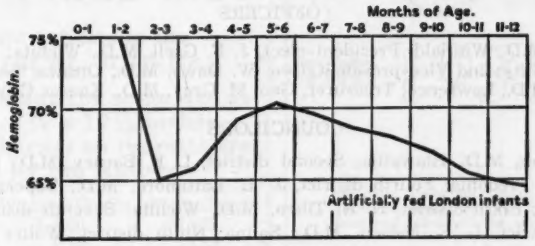

Hemoglobin level in the blood of infants of various ages. Note fall in hemoglobin, which is closely parallel to that of diminishing iron reserve in liver of average infant. Chart adapted from Mackay. It is possible to increase significantly the iron intake of the bottle-fed from birth by feeding Dextri-Maltose With Vitamin B in the milk formula. After the third month Pablum offers substantial amounts of iron for both breast- and bottle-fed babies.

Reasons for Early Pablum Feedings

1. The iron stored in the infant's liver at birth is rapidly depleted during the first months of life. (Mackay,[1] Elvehjem.[2])

2. During this period the infant's diet contains very little iron—1.44 mg. per day from the average bottle formulae of 20 ounces, or possibly 1.7 mg. per day from 28 ounces of breast milk. (Holt.[3])

For these reasons, and also because of the low hemoglobin values so frequent among pregnant and nursing mothers (Coons,[4] Galloway[5]), the pediatric trend is constantly toward the addition of iron-containing foods at an earlier age, as early as the third or fourth month. (Blatt,[6] Glazier,[7] Lynch[8].)

The Choice of the Iron-Containing Food

1. Many foods reputed to be high in iron actually add very few milligrams to the diet because much of the iron is lost in cooking or because the amount fed is necessarily small or because the food has a high percentage of water. Strained spinach, for instance, contains only 1 to 1.4 mg. of iron per 100 gm. (Bridges.[9])

2. To be effective, food iron should be in soluble form. Some foods fairly high in total iron are low in soluble iron. (Summerfeldt.[10])

3. **Pablum is high both in total iron (30 mg. per 100 gm.) and soluble iron (7.8 mg. per 100 gm.) and can be fed in significant amounts without digestive upsets as early as the third month, before the initial store of iron in the liver is depleted. Pablum also forms an iron-valuable addition to the diet of pregnant and nursing mothers.**

Pablum (Mead's Cereal thoroughly cooked and dried) consists of wheatmeal, oatmeal, cornmeal, wheat embryo, brewers' yeast, alfalfa leaf, beef bone, iron salt and sodium chloride.

[1-10] Bibliography on request.

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CANNED FOODS AND THE PUBLIC HEALTH

V. FOOD IN THE OPEN CAN

• In September 1935, the facts about food in the open can were presented on this page. It was stated that there was no reason, from the standpoint of food poisoning, why food must be removed immediately after the can is opened. This statement bore the Seal of Acceptance of The Committee on Foods of the American Medical Association.

However, since that time, two incidents have occurred which lead us to present again the facts concerning food in the open can.

First, late last fall, a national organization dedicated to the relief of human distress during war and disaster, issued a list of precautions designed to reduce accidents in the home, in which it was erroneously recommended that food be removed from the can immediately. The Department of Agriculture detected this error and called it to the attention of those responsible for issuance of the recommendations. A correction was made as soon as possible but the damage had already been done. The original safety recommendations had meanwhile been issued in schools and newspapers throughout the country, thus giving further support to this old, unbased prejudice against canned foods.

Second, in the early months of 1936, a release regarding food in the open can was made by a national press service to newspapers throughout the land. The strong inference was made in this press release that food left in the open can might become hazardous to consumer health.

This dissemination of misinformation, referred to in the two instances cited above, has caused an increase in the number of consumer inquiries concerning the safety of food in the open can. To reply to these requests for reliable information, we can well quote from a recent release made by the Department of Agriculture (1).

(1) U.S.D.A. Press Release, Feb. 23, 1936

"It is just as safe to keep canned food in the can it comes in—if the can is cool and covered—as it is to empty the food into another container. Thousands of housewives are firm in the faith that canned goods ought to be emptied as soon as the can is opened, or at least before the remainder of the food goes into the refrigerator—one of the persistent food fallacies. The question keeps coming to the Bureau of Home Economics in letters from home-makers.

"A few acid foods may dissolve a little iron from the can, but this is not harmful, not dangerous to health. Cans and foods are sterilized in the 'processing'. But the dish into which the food might be emptied is far from sterile. In other words, it is likely to have on it bacteria that cause food to spoil.

"Whether in the original can or in another container, the principal precautions for keeping food are—Keep it cool and keep it covered."

AMERICAN CAN COMPANY

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This is the thirteenth in a series of monthly articles, which will summarize, for your convenience, the conclusions about canned foods which authorities in nutritional research have reached. We want to make this series valuable to you, and so we ask your help. Will you tell us on a post card addressed to the American Can Company, New York, N. Y., what phases of canned foods knowledge are of greatest interest to you? Your suggestions will determine the subject matter of future articles.

The Seal of Acceptance denotes that the statements in this advertisement are acceptable to the Committee on Foods of the American Medical Association.

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REMISSIONS IN PROGRESSIVE MUSCULAR DYSTROPHY*

DANIEL V. CONWELL, M.D.
Halstead, Kansas

Remissions have occurred in progressive muscular dystrophy after persistent use of viosterol and of haliver oil with viosterol in this clinic with such regularity that the experience seems worthy of record. Not only was the progress of the disease checked but there was return of function, which varied from improved motor power to complete return to normal. The amount of improvement was governed by the duration of the disease and the extent of muscle loss before treatment was instituted.

In 1930, after four months of viosterol therapy for rickets (Case I) a coexisting, far advanced, progressive muscular dystrophy showed unexpected improvement. A search of the literature failed to reveal viosterol as a treatment for muscular dystrophy but considering our past failures with this disease the incident was mentioned to subsequent muscular dystrophy patients. Some of them elected to follow this regime and in this group remissions have occurred. Improvement in this disease was so unusual that the following six cases are reported.

CASE I

J. D., a boy aged nine, came to the outpatient department on May 3, 1929, complaining of inability to walk. The family history was negative. He was a first child, full term and the delivery was normal. He presented a feeding problem and was malnourished until the age of two years. His appetite continued to be irregular and finicky. He was subject to upper respiratory infections and had chickenpox at the age of seven.

*Read before the Southeast Kansas Medical Society on March 25, 1936, in Fredonia.

At the age of six he began to have difficulty in walking, at first losing his balance on uneven surfaces and later he fell frequently. Getting up from the floor required the use of his arms. At seven and one-half years, he began to have trouble in raising his arms. The weakness gradually increased, involved the trunk muscles and was followed by wasting of the muscles of the affected parts. Since March, 1929, his arms and legs have been useless and he has been unable to sit up without support.

The examination showed a small boy of stated age whose speech and mental state were normal. He could not pout nor whistle. He could not raise his head from or turn over on the bed. The pulse was ninety-six, and the blood pressure ninety systolic, and sixty-five diastolic. The chest presented a rachitic rosary. The hand and forearm muscles were fairly strong but the musculature of the shoulders and arms was markedly atrophic and almost completely paralyzed. He could not sit up without support and then the position was an exaggerated lordosis. When attempts were made to lift him, he would slip through the hands. There was marked bilateral wasting of the buttock, thigh and anterior tibial group muscles with pronounced weakness. He could hardly raise his knees from the bed. The electrical reactions were markedly reduced. Except that he could make his wishes and needs known, he had to be cared for like a baby. The urine findings were normal and the blood Wassermann was negative.

Because of the rickets, he was given three drams of cod liver oil a day, which was continued until February 28, 1930. There was some improvement in his appetite but the physical findings were unchanged. Beginning on that date he was given ten minims of viosterol daily. On June 27, 1930, he could raise and hold his head from the bed and turn

over in bed quite easily. While he could not raise up to a sitting position without aid, he could remain erect and without support when placed in that position. He was able to raise and hold either arm above his head, feed, dress and undress himself, kick quite well and move about on an "Irish Mail" car. The reflexes remained absent but the sensations were normal. The electrical reactions were a little stronger than on the previous examinations. Treatment was discontinued in January, 1931. The improvement continued slowly until July 1931. After that time part of the gain was gradually lost. In May 1935 he could not set up without support but could handle his books, feed himself and help dress and undress himself.

CASE II

R. B., a boy aged fourteen, came to the outpatient department July 17, 1930, complaining of weakness and wasting of both arms and shoulders. The family history was negative. He had an adenoidectomy at four, whooping cough at five, measles at nine, influenza at eleven and tonsillectomy at thirteen years. In September, 1929, he began to have trouble raising his right hand above his head. Weakness, followed by wasting, appeared later in the left shoulder, right arm and left arm muscles. His eating habits had always been irregular. His favorite meal consisted of hamburger sandwiches.

On examination, he wrinkled his forehead, pouted and whistled poorly. There was fairly marked weakness and atrophy of the muscles of both shoulders and arms, more marked on the right and most marked in the right triceps. There was a little weakness of the forearm muscles. The scapulae were winged. The legs were normal. The reflexes were diminished throughout with absence of the right biceps, both triceps and both radial reflexes. The sensations were normal. The faradic and galvanic reactions were poor over the shoulders and arms. The urine findings, blood count and blood Wassermann were normal.

He was started on thirty minims of viosterol daily. This he took regularly until October 20, 1930, when the arms and shoulders were definitely stronger.

When seen on December 27, 1930, he reported he had followed treatment about one-third of the time. There was some increased weakness of the right triceps muscle while the motor power otherwise seemed stationary. He had abandoned treatment for the nine months preceding September 19, 1930, when the examination showed more marked weakness of the shoulders and arms with absence of all deep reflexes, except that the tendo achilles responses were one plus.

He reported three months' regular use of the oil on December 28, 1931. There was no apparent improvement or loss objectively or subjectively. He continued to follow treatment regularly until April 13, 1932. There was improved strength of the shoulders and arms and some increase in the circumference of the arms. From then until June 8, 1932, he discontinued treatment. The motor power remained stationary.

He then took the oil part time until April 22, 1933, when he reported a very definite gain in strength. He could raise his arms above the shoulder level. The left arm circumference had increased. The muscles of the face, both shoulders and arms were stronger.

On July 18, 1934, he reported intermittent treatment. He was slowly gaining strength and was able to run a filling station, drive a car or motorcycle and play golf. The gain in motor power of the shoulders and right arm had been maintained, there was further improvement in the strength of the facial and the left arm muscles and there was normal strength of the forearm muscles. The electrical reactions were stronger. During 1935 he followed treatment part time and the gradual improvement continued.

CASE III

G. C., a boy aged six, came to the clinic on March 9, 1931, complaining of weakness of the legs and inability to control them. The family history was negative. He had measles at the age of four. His dietary habits had always been irregular. Early in the fall of 1930, the parents noted the boy had difficulty with his legs when he ran. Walking became increasingly difficult. He had trouble balancing and going up steps. Getting up from the floor could only be accomplished by the aid of the arms.

Examination showed a fairly well developed boy of six. His speech, mental state and cranial nerves were normal. The neck and upper extremity muscles were strong. The thigh muscles were flabby and the calves well developed and firm. The strength at the hips was poor, fair at

the knees and good at the ankles. He was able to kick feebly but awkwardly. He assumed a moderate lordosis posture on standing and walked with a waddling gait. He walked up steps very slowly and with the aid of his arms. He got up from the floor by rolling over on his hands and knees and using his hands on the floor and thighs. The bicep jerks were one plus, knee jerks absent and the tendo achilles reflexes one plus. The sensations were normal. The electrical reactions were diminished. The urine findings and blood count were not remarkable and the blood Wassermann was negative. He was placed on ten minims of viosterol daily.

While following this treatment, no progress could be noted by the parents for three months, though there seemed to be a gradual gain in the strength at the hips and definite improvement of the thigh muscle tone and strength.

On June 10, 1931, the awkwardness and lordosis were definitely less.

By September 7, 1931, he could walk well, the lordosis was gone and he was able to sit down on a low seat and arise with little extra effort. He walked up steps with slightly less than average speed and could rise from the floor without the use of his arms. The thigh muscles were firm and the electrical reactions were about normal. The knee jerks were one plus. He was able to run quite well. The viosterol was decreased to six minims a day. Continued improvement was noted and, in November of 1931, he was able to use his legs well, but tired more quickly than other children. Treatment was discontinued in March 1932. In the summer of 1933, he was considered normal in activity and strength.

CASE IV

J. C., a housewife aged sixty-six, came to the out-patient clinic on July 1, 1933, because of trouble in walking and arising from a chair. The family history was negative. A fistula in ano was treated surgically at forty-eight. Her menopause was completed at fifty-five. A contact dermatitis appeared at the age of sixty-four. During the past year she had followed a low protein diet because of an essential hypertension.

About May 1, 1933, her thighs began to sting, tingle and burn. She experienced increasing difficulty getting into and out of a chair and on going up steps. The gait became waddling on level surfaces and she could not walk on uneven ground without falling. Work in her flower garden became impossible. She got up from the ground by turning over on her hands and knees and using her hands on her knees and thighs.

The examination showed normal cranial nerves. The muscles of the upper extremities and trunk were strong. The pulse was eighty-four, and the blood pressure was 160 systolic, and ninety diastolic. The strength was poor at the hips, fair at the knees and good at the ankles. The thigh muscles were hypotonic and the electrical reactions decreased. The biceps jerks were two plus, knee jerks absent and the tendo achilles reflexes one plus. The sensations were normal. The gait was slow and waddling. She had to use her arms on getting into and out of a chair, on steps and on getting up from the floor. She fell promptly when squatting. The urine findings, blood count and blood Wassermann were normal.

She was given nine minims of haliver oil with viosterol daily. By July 30, 1933, the patient thought her legs were stronger and she seemed to have improved use of her lower extremities, but continued to lose her balance readily and need her arms on arising. The waddling gait persisted.

On September 8, 1933, she could get up from a chair without the use of her arms but needed their help on arising from the floor. She walked quite well.

October 16, 1933, the examination showed normal use of her hips and thighs. The electrical reactions were normal. She then took the viosterol every other week until January 10, 1934, when it was discontinued. The strength of the lower extremities continued normal and there were no signs of a relapse in November 1935.

CASE V

G. S., a school boy aged ten, came to the clinic on August 2, 1934, complaining of weak legs. The family history was negative. His tonsils were removed at the age of five. His appetite was variable and largely limited to starchy foods. During the winter of 1933-34 a gradual weakness of his legs was noted, first as difficulty in running. In March, 1934, he observed greater need for balancing when standing or walking. His knees would give way and he fell frequently. He had trouble going up steps and getting out of a chair. Following a week of fever, malaise and lassitude in April,

1934, his legs seemed to lose strength more rapidly.

On examination the cranial nerves were normal. His strength was good at the ankles, fair at the knees and poor at the hips. He had trouble going up steps and getting out of a chair. A pronounced waddling gait was present. He had to use his hands to get up from the floor. He could not run or hop. The electrical reactions were diminished. The deep reflexes were absent.

He was started on six minims of haliver oil with viosterol daily. By September 5, 1934, there were no apparent objective or subjective changes. On October 28, 1935, he could run slowly for a short distance without falling. He could walk faster, with less waddling and much less tendency to fall though he tired quickly. He had less difficulty getting out of chairs and going up steps. The biceps jerks were one plus, knee jerks one plus and tendo-achilles reflexes one plus.

On January 14, 1935, he stated that he was able to play soccer but could not run as fast or kick a ball as far as his playmates. He still tired readily. On examination, if he was not hurried, he carried out all strength tests normally. If he was hurried, a little weakness and awkwardness became apparent.

He was still taking the oil regularly on March 23, 1935, when he reported continued good use and much less tiring of his lower extremities. He was particularly pleased by the returned ability to jump and touch an awning which had been beyond his reach for eighteen months. On June 14, 1935, his strength was normal and the faradic and galvanic responses were normal.

The following case report is included, because of the possible working condition factor.

CASE VI

R. C., a car inspector aged forty-seven, entered the Halstead Hospital on March 30, 1935, complaining of weak legs. The family history was negative. He had diphtheria at the age of six. He had worked nights for the past thirteen years. In the autumn of 1934, his legs began to tire. His work required squatting and he observed increasing difficulty in arising. His legs became awkward and weak and, by February 11, 1934, he could not walk well enough to carry on his work.

Examination showed bilateral weakness of the shoulder muscles. The lower extremities were strong at the ankles, fairly strong at the knees and very weak at the hips. The thigh muscles were flabby. He could just raise his knees from the bed. The knee jerks and tendo-archilles reflexes were absent. The sensations were normal. The electrical reactions were reduced. Lordosis was present on standing. He got out of bed with great difficulty and had to use his arms to arise, to stand or to walk. The gait was waddling and slow. He dropped heavily into a chair and arose only with the use of his arms. He could not rise from the floor without the aid of two attendants. The blood count, blood Wassermann, urine and spinal fluid findings were normal.

He was given nine minims of haliver oil with viosterol daily, kept at rest and given daily massage. By June 15, 1935, the strength at the shoulders was about normal. He could raise his legs easily and well from the bed and there was improved tone and strength of the thigh muscles. The electrical reactions were stronger. He had great difficulty in walking and handling himself when out of bed. During the summer of 1935 he used crutches to balance himself on walking. In November, 1935, he could walk in the house without assistance.

COMMENT

A history of heredity factor was unobtainable in these six patients. The four children had been on faulty diets of their own selection. One adult had followed a low protein diet for a year and the other adult employed a well balanced diet but had been exposed to the sun very little for thirteen years. There was no uniformity of the dietary faults. Three months of treatment was usually necessary before improvement could be observed. No untoward reactions were noted.

The return of motor power was incomplete in three and complete in three patients. Of the former, one has relapsed, one is still disabled and one carries on about normal activity. The latter three patients have returned to normal activity and two have discontinued treatment, one for about two and one for four years, without signs of relapse.

—JKMS—

Never give a definite opinion as to how long a patient suffering from pulmonary tuberculosis will live, for the only certainty is that if you do, you will be wrong.—Samuel Gee.

SOME MODERN CONCEPTS OF CANCER*

EARL C. PADGETT, M.D.†
Kansas City, Missouri

Needless to say, I appreciate the compliment of being asked to speak before an audience of this calibre. I am somewhat of a "left handed" member of this society, having been elected after graduation from medicine, and no one is at more of a loss to know the reason for even this later recognition than I am. Some students gain speed toward the later years in medicine and may develop slowly the habit of working for fun. To such the habit of work is acquired often by force of circumstances.

When your chairman asked me to give him the subject of my talk I rather hurriedly turned in one which covers a good many fields. On giving the matter more thought I became aware that the proper knowledge for a good presentation of this subject would mean that one should possess a working familiarity with the sciences of genetics, chemistry, biology, physiology, physics, pathology, surgery, and radiology. In trying to encompass this large order, however easily I touch the high places, I no doubt remind you of the small boy whose eyes were always larger than his stomach.

THE TERM CANCER

The term "cancer" as it is often understood by the uninformed is considered to be a single disease. In the best informed circles at the present time cancer is considered not one disease but a multitude of diseases. We ordinarily think of cancer in terms of the cell of origination. So far as I know there is no cell in the body which can not at almost any stage of its growth cease to grow in an orderly normal manner and begin to grow in an unrestrained fashion. When it is understood that any cell in the body at any period of its life history may for some reason or another receive this growth stimulus, it is readily understood how the number and types of possible malignant growths might be almost innumerable. As a matter of fact, this is nearly the case. And even besides malignant growths to which the term "cancer" is ordinarily applied, there are also a large number of benign growths. Moreover, the gradation between certain types of malignant growth and certain types of benign growths is not always sharply defined.

*Delivered before the Kansas Chapter of Sigma XI at Lawrence, Kansas, December 19, 1935.
†From the Department of Surgery, University of Kansas School of Medicine.

INCIDENCE

It is well known that the highest incidence of ectodermal malignant tumors is from the beginning of the fourth decade on, reaching a maximum in the sixth decade. But Pack has shown that in tumors developing from mesodermal tissue, the incidence varies only slightly from the ages of twenty to ninety years when the number living of each age group is considered. Largely because of cancer in the female genital organs and the breast, the female of the species runs about a nine per cent higher incidence of cancer than the male.

CONCERNING THE ETIOLOGY

Needless to say, the true reason—the true cancerigenic agent—that causes a given cell suddenly take on unrestrained growth characteristics is not known. A great deal is known about various irritating cancerigenic agents which secondarily contribute to malignant growths but these really have no bearing on the fundamental problem of the true nature of the cancer process. Practically all research workers at the present time agree that cancer is not a germ or virus disease. Diet seems to have little or no relationship to the disease. The excess or deficiency of hormones or vitamines certainly does not appear to be the universal cause of cancer although it is not to be denied that certain conditions may be influenced by diet, chemicals, and hormones. Syphilis does not contribute to the production of cancer in a general sense; only in the sense causing scars in certain locations which may afterwards lead to malignant degeneration. Tuberculosis was once thought to be antagonistic to cancer but this view is not held now.

Generally the conception that a single trauma acting alone is capable of producing a malignant tumor is given little credence. To trauma must be added additional factors, such as delayed healing, infection, chronic irritants, or possibly a hereditary factor or the factor of local predisposition. If one adheres strictly to the preceding criteria, the probability of the occurrence of true traumatic cancer in man is largely nullified.

In animals considerable work has been done by inbreeding which would indicate in the laboratory at least that heredity can be made to play a predominant factor in the susceptibility to cancer. Maude Slye has been the most prominent worker in this particular problem. More recently Lacassaigne working along similar

lines with mice inbred so as to be susceptible to cancer, found that when an oestrogenic substance was injected the production of mammary cancer depended upon a hereditary susceptibility. Along these lines certain observations on the occurrence of cancer in identical twins is interesting. Although a few special rare tumors do have a relation to heredity, the general incidence of cancer in the human, however, is not thought to be influenced particularly by a genetic factor. Usually a history of cancer in a certain family is best interpreted as a combination of other secondary factors such as age, occupation, habits, anatomical and physiological peculiarities.

The most outstanding contributing cause of cancer in the practical sense in its various forms is the chronic irritants to which the human body is exposed from the cradle to the grave. To enumerate all these factors is almost impossible. But one of the most prominent is the result of the application of heat such as sunlight and so forth, and exposure to weather over a long period of time. Within the mouth a striking example of an irritant long continued is that of dirty and jagged teeth or a hot pipe stem. A cigarette is often irritating to the lip. A contributing factor in cancer of the female genital organs is often some chronic form of inflammation or a scar resulting from child birth. Lack of cleanliness often, but in rarer instances tar, pitch, dye stuffs, petroleum and other irritants have played a role in the production of a skin cancer. It is not unusual to find examples of cancer developing in old x-ray or radium burns. The development of breast cancer possibly has some relation to irritating retention products. Adair has produced some evidence that cancer of the breast is considerably more common in women with an abnormal nursing history. Infection with certain animal parasites may predispose to cancer. Bilharzia infection of the bladder is an example of such. Workers exposed to coal tar derivatives after working about two years show a five per cent increase in the incidence of cancer of the bladder. The increase in bronchiogenic carcinoma has been attributed to the increase of coal dust and gases from automobiles in the industrial areas and more thickly settled areas. However, this factor still needs confirmation. Sunlight undoubtedly affects the white race and albinos and persons with red hair more than it does the darker races. The negroes are least effected by this irritant. The list of chronic irritants which may increase the incidence of cancer is almost innumerable.

MODERN CANCER RESEARCH

Thirty-five years ago it was impossible to produce cancer experimentally. To-day it can be produced in the lower animals in many ways. Warburg has shown that cancer cells are characterized by the loss of respiratory function and a gain in lactic acid production. This would tend to show that cancer cells can survive where normal cells cannot survive. No method of controlling this metabolic anomaly has as yet been found. Kennaway and Cook have shown that high distillation products of coal tar are remarkable cancerigenic agents in animals and the further discovery that these tar derivatives are closely related chemically to certain secretions of the body such as oestrin and bile acids is very suggestive. Cook obtained from bile acid by a process of oxidation and dehydration methyl cholanthrene which on experimentation proved to be an active cancer producing agent. Some of these cancerigenic coal tar derivatives were found also to bring on menstruation in ovariectomized animals and in immature animals to rather rapidly produce sexual maturity. Also several of the hormones in the pituitary, testes, and ovaries have produced an overgrowth of cellular tissue which had the appearance of being of a pre-cancerous nature. Some of the lesions seemed to be of true cancerous type. When malignant degeneration was faced there was usually a secondary factor of trauma or infection which seemed to play a part.

The anti-rachitic (vitamin D) vitamine was found to be clinically related to the anthracene series and was also found to possess oestrogenic properties.

Waterman and others have endeavored to demonstrate the existence of a constitutional predisposition to cancer hereditarily transmitted and generally supposed to consist in a relative alkalosis. No confirmation of this work has been as yet obtained, however.

Ewing states that the adherents to the parasitic theory have rallied under the banner of the chicken sarcomas. But most workers agree now that these sarcomas are peculiar to this particular species. Murphy has shown that the properties of this agent are those of an unorganized chemical one and that the agent is probably largely micro-organic.

Cancer research has improved vastly in recent years and now enjoys the support of com-

petent men in nearly every branch of science. Specific problems are being attacked and as Ewing notes the era of free speculative generalization of cancer has largely passed.

DIAGNOSIS

Modern diagnosticians and pathologists are cognizant of the fact that cancer in one organ differs from cancer in another organ and that the same organ may have different forms of cancer. In the diagnosis these forms should be emphasized. By identifying the tissue of origin the tumor pathologist tends to reveal the life history of the growth. For example, ectodermal carcinoma shows many varieties with a different clinical course, mode of recurrence, a different prognosis and a varying reaction to treatment according to histogenesis. The degree of malignancy as based on the cellular characteristics and the general structure, may to a certain extent be estimated by the pathologist. Similarly he should be able to predict to a certain extent the relative radiosensitivity of the growth after consideration of the cell of origin, the vascular structure, the character of the tumor bed, the type of intracellular stroma, and the presence or absence of infection.

Besides being aware of the microscopic peculiarities of tumors the diagnostician should be familiar with certain physiological states. In certain giant cell tumors and certain bone sarcomas the physiology of the parathyroid glands is of importance. When such tumors are suspected studies of the mobilization of the blood calcium should be made. In the diagnosis of testicular neoplasms Ferguson has shown the value of quantitative tests for antuitrin or Prolan A. In certain ovarian tumors the cells or origin may be defined when appropriate hormonal studies have been made. Adrenal gland tumors display a peculiar clinical picture of disturbed adrenal physiology as do pancreatic and pituitary gland tumors.

Ewing states that as far as the pathologist is concerned the situation has reached a point where it is best for him instead of putting the tumor in formalin as formally, to also put some of it in the ice box for further biological study and then join the clinician for further clinical investigation.

TREATMENT

Although without doubt neither irradiation methods or surgery have given the final answer insofar as therapy is concerned, the three most effective weapons of attack in cancer therapy are: the x-ray, radium, and surgery. Surgery is the oldest weapon. Cancer surgery in recent years has been modified considerably, but surgery is still the most acceptable method for many types of cancer, especially the early types. Many new surgical procedures have been developed to be used in conjunction with radium and x-ray, the so-called "surgery of access." Now the surgeon before considering operation has also to consider the possibilities of irradiation therapy alone or in conjunction with surgery. Therefore, today in many ways the demands upon surgery have become heavier than before.

The use of x-ray and radium in the treatment of cancer is the more recent contribution. Many of the changes in the treatment of cancer during the last twenty-five years have been brought about by this newer knowledge. After starting with considerable hesitation and at first by using only empirical methods, the gradual development of irradiation therapy has now largely reached a position where one may prescribe a lethal tumor dose for some types of tumors with a fair degree of accuracy. A brief review of some of the fundamental conceptions pertinent to irradiation therapy should be of interest.

FUNDAMENTAL CONCEPTIONS PERTINENT TO IRRADIATION THERAPY AND TO IRRADIATION VERSUS SURGERY

In the beginning of x-ray therapy Bergonne and Tribondeau laid down the law that rapidly growing malignant tissue was more susceptible to irradiation than normal tissue. In other words, that an adult differentiated tumor is more radio-sensitant than embryonal or more undifferentiated cells. In 1912 Lazarus-Barlow showed that cells in a state of active mitosis were less resistant to irradiation than resting cells. These laws supplied the only basis for irradiation therapy.

Almost a decade and a half ago, Broders emphasized anew the importance of the degree of cellular differentiation insofar as prognosis was concerned. Broders demonstrated that to a certain extent he could estimate the prognosis by taking into consideration the percentage of undifferentiated cells in the various groups. Some criticism of this conception was made immediately. Probably the most important was that this conception does not quite take into consideration the length of time the tumor has been present and the size of the growth. As a matter of fact, there is a distinct tendency for

the cellular picture to be more malignant as the size of the growth is increased. Soon it was noted that in certain types of tumors the more undifferentiated the tumor appeared the more radio-sensitive the tumor was and on the other hand the more nearly the tumor assumed adult cellular characteristics, the more nearly the sensitivity approached that of normal tissue of a given cell type. Ewing, therefore, proposed the idea of estimating the relative radio-sensitivity of tumors along lines somewhat similar to Broders attempt to predict prognosis. When the cell of origin is taken into consideration—the most important factor in estimating radio-sensitivity—this conception has now assumed a position of considerable practicality.

The importance of delivering a lethal dosage for a given type of cell if a cure was contemplated began to be recognized. But in 1921, Wood and Prime showed that as far as epidermoid carcinoma is concerned that a lethal dose of irradiation was not delivered until seven to ten erythema doses were given. At that time the amount of irradiation ordinarily given was not that high. Within a few years after methods of interstitial implantation with highly filtered implants were worked out which to skin and mucosal malignant degeneration or when used in conjunction with higher voltage x-ray, in many instances allowed a lethal dosage to be prescribed with a fair degree of accuracy.

IRRADIATION THERAPY

There are several limitations to irradiation as a principle. The tolerance of normal tissue may not be sufficient to allow one to use large enough doses to overcome cancer, although fractionated doses may overcome this limitation partially. Another factor which handicaps one is that there has been shown that a dosage which kills most of the cells might not kill all of the cells. For instance, Packard showed that in rat sarcoma a dosage of 1,450 R killed ten per cent of the cells, a dosage of 1,950 R killed fifty per cent but 1 per cent survived 3,500 R. There are certain uncontrollable factors which are unpredictable. Sometimes the cure results when less than a lethal dose is given. Sometimes a fibrosis pens up the cells which ultimately start to grow again. After insufficient irradiation subsequent irradiation may be valueless and the door may be closed to other forms of therapy. Thus, the radiologist can not always predict the result of the therapy which handicaps him in his preliminary decision. But in spite of the limitations of irradiation therapy this method is being used extensively.

In the application of irradiation therapy, radium which delivers principally gamma rays and x-rays of varying wave lengths is used. One is sometimes used to supplement the other. The principles entailed are similar with possibly here and there some slight variation due to the shorter wave length.

(1) X-ray Therapy—One of the principal recent discoveries that has aided the x-ray therapist was the working out of the percentage of skin recovery from day to day. A short time ago skin recovery was thought to vary five to nine per cent daily, but it is known now that the recovery may be as high as sixty to seventy per cent during the first twenty-four hours. This means from a practical standpoint that when divided doses are given a much higher total amount of x-ray may be given.

The three principal methods of application of dosage are: (1) Large mass dosage given at one time or in one day. (2) The saturation technique of Pfahler, in which each portal is rather quickly brought up to an erythema and subsequently irradiation is added at short intervals over a period of several weeks taking into consideration the percentage of recovery during which each portal is held at a nearly constant erythema level. (3) The fractionated dose of Coutard, in which a third or a fourth of the erythema dose is given through one portal each day for a period of three or four weeks. An intense skin exfoliation is caused. These particular types of treatment have different effects upon the tumor cells, the stroma and the vascular elements. At the present time the relative effect of the various techniques are being energetically studied and although much is unknown a certain amount of data of value has been accumulated.

Pre-operative irradiation is increasing in favor. The best results are shown when the operation follows after sufficient delay has been allowed for tumor regression to become maximal.

A decreased emphasis is being placed upon post operative irradiation. As pointed out by Chamberlain post operative irradiation has always rested upon an unscientific foundation. Radiological cures depend upon the tumor sensitivity and the response of the tumor bed. If the radiologist can take care of a few cells he

can take care of all the tumor in the first place. In most instances, it is probably not possible to take care of the remaining cells with a "shot-gun" dose of x-ray.

One of the most important problems for the x-ray therapist to determine in the future is whether or not the use of higher voltage and thicker filters will increase the number of cures. Some men have said that by increasing the distance of the x-ray tube from the patient and by using a method of cross firing that we have already approached the maximal dose obtainable for the human body. However, most observers believe that this is probably not altogether correct. Some significance probably must be given to the fact that higher voltages tend to ionize atoms in a different manner. The deeper penetration of the neutrons probably adds something to the depth dosage—the essential factor.

(2) Radium Therapy—Some men have stated that the gamma rays of radium are superior to x-rays. This is not proven but it is possible that the gamma ray might have a greater specificity for certain tumor cells.

There are essentially only two methods of applying radium. Surface application by means of a radium bomb or a smaller radium pack and interstitial irradiation, a method which applies small foci of radium direct to a tumor mass. Usually about four grams of radium are necessary for the radium bomb which is used externally. Only a few institutions are wealthy enough to own this much radium. Surface irradiation, by means of a small radium pack, is used for both external and intracavity irradiation such as in the cervix of the uterus, the oesophagus, and the rectum. Often by external irradiation a lethal dosage cannot be given without causing irreparable damage to the intervening normal tissue. With interstitial irradiation a higher dosage can be given to the tumor because the foci (needles or seeds) are placed within the tumor itself. The normal cells are not damaged first. By the use of a previously experimentally established table for calculating the lethal dosage for a given tumor mass, a lethal or near lethal dose for the given type of cell can be prescribed when using interstitial irradiation. When a near lethal dose is given one can supplement the dosage with x-ray so the two together can make up the lethal dosage.

Conception Upon Which Surgery is Based

After the rather lengthy resume of certain conceptions concerning irradiation therapy it may be assumed that surgery has little place in the treatment of cancer. This is not at all the case. Surgery is still in many types of cancer the bulwark against which one rests when a cure is contemplated.

In the beginning cancer is supposed to be a local lesion and presuming that this is the fact, surgery should be effective if the local lesion is removed. To be on the safe side an additional margin of normal tissue also should be removed and when the life history of the tumor indicates that metastasis is likely to occur to the lymph tributary nodes they should be removed as an additional precaution.

It makes no difference what type of instrument is used for the surgery whether a knife, the endothermic knife or cautery as far as the principle is concerned. The object is complete removal of all tissue that might be involved with cancer. Generally speaking whenever complete removal is not possible the situation should be regarded as being beyond help from surgery.

Conclusion

Finally, in conclusion it may be stated with truth that the outlook of the cancer patient has improved vastly in the past few years. Advances have been made largely due to the combined efforts of the surgeon, the physician, the radiologist and the pathologist working together and concentrating on the subject of cancer as it occurs in the human.

Ewing, may with profit be quoted as to the essential requirements of he who presumes to treat malignant disease:

"The modern clinical diagnosis of neoplastic disease now involves so many tests, procedures, instrumentation, requiring skill in performance and experience in interpretation as to furnish overwhelming evidence that the diagnosis and treatment of cancer is a broad medical specialty, and can no longer be regarded as an avocation of the general practitioner or even of the unattached surgeon or radiologist."

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—JKMS—

The nature of the body can only be understood as a whole.—Hippocrates.

—JKMS—

We all labor against our own cure, for death is the cure of all diseases.—Sir Thomas Browne.

—JKMS—

Treat the man who is sick, and not a Greek name.—Jacobi.

A REPORT OF 4,511 TUBERCULIN TESTS USING AN INTERMEDIATE DILUTION OF TUBERCULIN PPD

CLIFTON HALL, M.D.*

Topeka, Kansas

The difficulty in securing parental consent for the tuberculin testing of children in schools and the added cooperation necessary on the part of all tested when multiple tests are used, together with the necessary increase in record-keeping, have long been prominent factors in curtailing the securing of reliable data on the infection rate among various groups. There is a certain percentage of those who fail to return for the interpretation when only one test is given, and each added test noticeably increases that percentage. The health officer and the private physician know how difficult it sometimes becomes to complete immunizations against typhoid and diphtheria when two or three visits are necessary, especially in the absence of an epidemic. Why this is true, can probably be best explained by the psychologist. It is, however, a recognized obstacle to the smooth running of an otherwise efficient program, especially so in a tuberculin testing program where no immunity is conferred.

Kansas has a low death rate from tuberculosis and might reasonably be expected to have a somewhat correspondingly low infection rate. It might be further reasoned that a large number of those who are infected have received a much milder infection than would result in a community where the death rate was higher.

With the above reasoning in mind, a method of tuberculin testing was worked out using PPD as the material of choice. Second strength PPD contains 250 times the tuberculo-protein of first strength PPD. By diluting the second strength to one-tenth its concentration, we obtain a solution which is twenty-five times the strength of PPD first strength. This intermediate solution furnishes the basis for the testing included in this report. Obviously more menstrum is necessary than that included by the manufacturers of PPD. Additional material is made by the state board of health laboratory, according to the formulae published in the supplement of the American Review of Tuberculosis. This menstrum is sealed in five cc. rubber stoppered vials. One tablet (second strength PPD) dissolved in the contents of one

*Director, Division of Tuberculosis, Kansas State Board of Health.

vial, gives sufficient material for 100 tests each consisting of .0005 mg PPD in .05 cc. of solution. The smaller quantity of solution, namely .05 cc, rather than the customary .10 cc. was used as it is considered just as accurate and causes a little less pain resulting from the separation of the epidermis, which results in increased ease in operation, especially in young children and apprehensive adults.

How accurate is the intermediate test and what is the degree of reaction? One hundred one children were given multiple tests. The results are tabulated in Table 1.

TABLE 1

MULTIPLE PPD TEST RESULTS

Number Tested	1st Strength	Intermediate Strength	Second Strength
62	Negative	Negative	Negative
16	"	"	-*
3	"	"	One plus
4	"	One plus	One plus
1	"	Two plus	Three plus
7	"	One plus	-
3	"	Two plus	-
4	"	Three plus	-
1	One plus	One plus	-
101	Total		

*No test with this concentration.

The foregoing data are not conclusive proof that the intermediate test solves the problem of the desirable single test method of tuberculin testing. There were three children who gave a positive reaction to second strength after giving negative reactions to the first and intermediate strength. There were nineteen children who gave positive reactions to the intermediate strength after giving negative reactions to the first strength. Five of these were retreated using second strength, with only one giving a larger reaction with the stronger solution. Likewise one child gave the same type of reaction to both first and intermediate tests. This series is very small, but nevertheless we believe that the use of an intermediate strength of tuberculin PPD, in a community where the death rate from tuberculosis is relatively low, is justifiable. We do not believe it causes an unduly high percentage of large or severe reactions and on the other hand, believe that it does serve its purpose as a reliable and sufficient diagnostic agent for determining tuberculous infection.

During the fifteen months period ending December 31, 1935, 4,511 tuberculin tests have been given in twenty-seven counties of Kansas as follows:

Allen, Butler, Chautauqua, Cherokee, Coffey, Cowley, Dickinson, Ellsworth, Finney, Franklin, Greenwood, Graham, Lyon, McPherson, Miami, Montgomery, Morris, Osage, Pawnee, Saline, Sedgwick, Seward, Shawnee, Sumner, Washington, Wilson, Wyandotte.

The individuals tested may be divided into two groups: First, those who came to the tuberculosis clinics for examination and represent individuals who for some reason or other presumed that there was a possibility of their having tuberculosis; and, second, those who were tested in school-wide testing projects. While the first group accounts for most of the counties, it accounts for only 27.1 per cent of the total tests.

The counties in which tuberculin testing was done in conjunction with the clinic service rendered, together with the number of tests given at the clinics and the number of positive reactions, are tabulated in Table 2.

TABLE 2

TESTS GIVEN AT CLINICS

County	No. of Tests Given	No. of Positive Reactions	Per cent of Positive Reactions
Allen	17	3	17.6
Butler	191	66	34.5
Chautauqua	36	11	30.6
Cherokee	13	11	84.6
Coffey	20	9	45.0
Cowley	82	36	43.9
Dickinson	72	16	22.2
Ellsworth	21	8	38.1
Finney	24	18	75.0
Franklin	22	7	31.8
Greenwood	39	12	30.8
Kingman	65	14	21.5
Lyon	144	42	29.2
McPherson	74	37	50.0
Miami	102	23	22.5
Morris	29	12	41.4
Osage	29	26	89.7
Saline	62	14	22.6
Sumner	56	22	39.3
Washington	25	3	12.0
Wilson	101	28	27.7
Totals	1,224	418	34.15

The tests were given to those in all age groups from under one year to 79 years of age. Many of those tested were children who were either contact cases or cases referred to the clinic because of malnutrition or lassitude.

Figure 1 shows clinic tests by sex and age groups and the per cent positive in each age group.

The races represented (but not shown in Figure 1,) may be tabulated as shown in Table 3.

TABLE 3

CLINIC TESTS BY RACE AND SEX

	Male			Female		
	Total Tests	No. Pos.	Per cent Pos.	Total Tests	No. Pos.	Per cent Pos.
White	494	164	33.2	660	211	32.0
Mexican	12	8	66.7	27	20	74.1
Colored	16	6	37.5	15	9	60.0
Total tests				1,224		
Total Positives				418		
Average per cent positive....				34.15		

School-wide testing was done in ten counties as shown in Table 4.

TABLE 4

TESTS GIVEN AT SCHOOLS

County	Number tests given	Number Positive Reactions	Per cent Positive Reactions
Cowley	165	60	36.4
Greenwood	432	56	12.9
Lyon	516	70	13.6
Montgomery	48	14	29.2
Pawnee	324	20	6.2
Sedgwick	573	131	22.9
Seward	659	57	8.6
Shawnee	132	25	18.9
Sumner	185	83	44.9
Wyandotte	253	91	36.0
Totals	3,287	607	18.46

The above table reveals a wide variation in the percentage of positive reactors found, and a work of explanation seems advisable.

The Cowley county tests represent a group tested by the local health officer, Dr. Theis. These were indigents, many of whom were definite contacts. The tests for Montgomery county were given at the Legionville Preventorium for children six to twelve years of age who were either underweight and feeding problem children, or contacts of parents having tuberculosis. The contacts would be expected to raise the general average of this group.

The highest percentage of positive reactors was obtained in a high school group in Sumner county. There was an active case of tuberculosis in the graduating class of the previous year. This case has since died of the disease. How long the case was active in school is not known, but it is fair to say that the case was, in all probability, active during the whole senior year. It is interesting to note the variation in the percentage of positive reactors in the various classes. The present senior class (juniors when the active case was in school) gave seventy-two per cent positive reactions; the present junior class (sophomores last year) gave seventy-one per cent positive reactions; the sophomores (freshmen last year) gave fifty per cent positive reactions and the present freshman class, gave eleven per cent positive reactions. This range of reactions from seventy-two per cent to eleven per cent, is significant and we believe that most of the difference may be attributed to the one case of active tuberculosis in last year's senior class.

The Wyandotte county figures represent testing among four groups of individuals in Kansas City, Kansas. Three of these groups were orphan homes, while the other consisted of a Mexican settlement school. The reactions of these individual groups are outlined in Table 5.

TABLE 5

KANSAS CITY TESTS BY GROUPS

	No. tested	No. Pos. Reactors	Per cent Pos. Reactors
Orphans Home—White	26	3	11.5
Orphans Home—white	60	17	28.3
Orphans Home—colored	27	3	11.1
Mexican school	140	68	48.5

The remaining counties in which testing was done are listed in Table 6 in the order of their density of population and represent no particular problem. They were all average schools in the largest city of the county.

TABLE 6

REMAINING SCHOOL TESTS BY COUNTIES IN ORDER OF DENSITY OF POPULATION

County	Group tested	No. tested	No. Pos. Reactors	Per cent Pos. Reactors
Sedgwick	High school	573	131	22.9
Shawnee	College (fresh)	132	25	18.9
Lyon	Grade school and teachers	516	70	13.6
Greenwood	High school	432	56	12.9
Pawnee	High school	324	20	6.2
Seward	Grade and high school	659	57	8.6

Figure 2 shows the school tests by sex and age groups and the per cent positive in each age group. Those above school age represent superintendents, principals, teachers, janitors, etc.

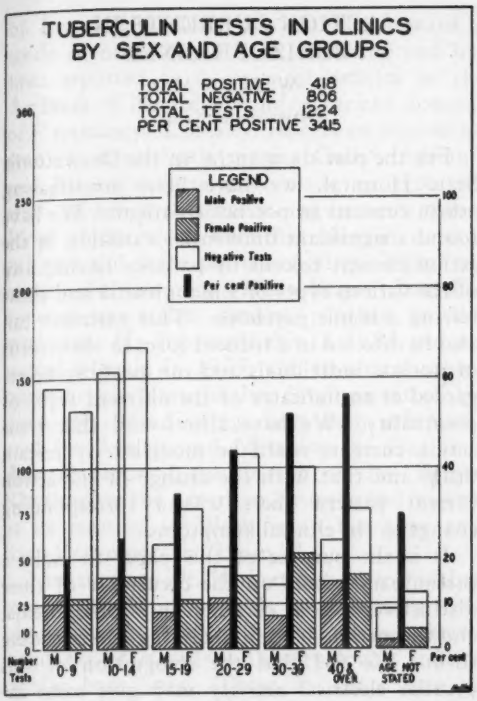

Fig.1.

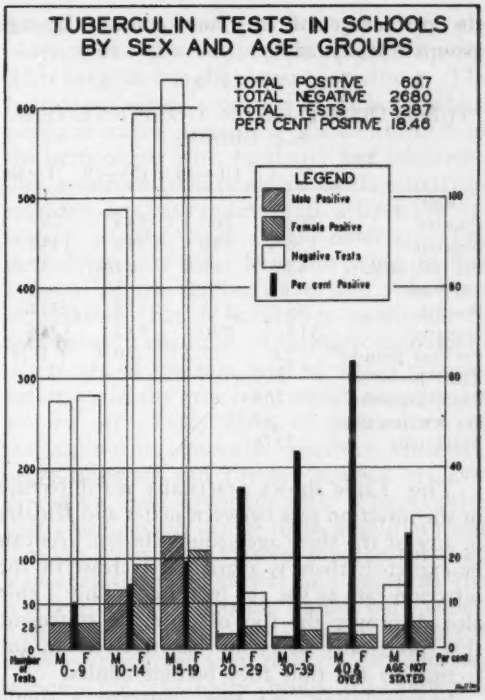

Fig.2.

The races represented (but not shown in Figure 2,) may be tabulated as shown in Table 7.

TABLE 7

SCHOOL TESTS BY RACE AND SEX

	Male			Female		
	Total Tests	No. Pos.	Per cent Pos.	Total Tests	No. Pos.	Per cent Pos.
White	1,460	242	16.5	1,597	268	16.7
Mexican	87	41	47.1	77	38	49.4
Colored	30	8	26.6	35	10	28.5
Indian	0	0	0	1	0	0

Total tests 3,287
Total positive 607
Average per cent positive....18.46

The clinic cases as shown in Figure 2 reveal a definite increase in the percentage of positive reactors in all age groups up to forty years of age, over the school tests in Figure 1. The average percentage is nearly twice that of the school group. This fact indicates that a true cross section of the infection rate among the general population is somewhere between the two sets of figures. The per cent of positive reactions as shown in Figure 2 further indicates that a better selection of clinic material might possibly be made by those referring cases to the clinics.

Of a total of 4,511 tests given, 1,025 or 22.7 per cent gave positive reactions. The degree of those reactions are shown in Table 8.

TABLE 8

Positive reactions	Number	Per cent
Degree not stated	22	2.15
1 plus (edema 5-9 mm)	475	46.34
2 plus (edema 10-19 mm)	406	39.61
3 plus (edema over 20 mm)	118	11.51
4 plus	4	.39
Totals	1,025	100.00

Nearly one-half of the positive reactions were interpreted as one plus, showing an area of edema from five to nine mm. in their largest diameter. The number of four plus reactions, namely four, is very small compared with results reported in the current literature. It is unfortunate when these four plus reactions occur as they are likely to cause considerable adverse criticism.

While all age groups were tested, a sufficient number of tests were obtained in only three five-year age groups to obtain a fair degree of accuracy in order to show the gradual increase in the percentage of infection with increasing age. Table 9, we believe, gives a fair idea of

the percentage of infection among the age groups represented:

TABLE 9

TUBERCULIN TESTS IN THREE FIVE-YEAR AGE GROUPS

	5—9	10—14	15—19	Totals
Male				
Positive	48	105	144	297
Negative	326	550	543	1419
Per cent positive	12.8	16.0	21.0	17.3
Female				
Positive	46	133	135	314
Negative	314	620	512	1346
Per cent positive	12.8	17.7	20.9	17.8
Total positives 611				
Total negatives 1765				
Per cent positive..... 17.5				
Total tests 2376				

This Table shows practically no difference in the infection rate between males and females in any of the three age groups shown. As can be expected, there is a gradual increase in the infection rate as the age increases. This Table also disproves the too often made statement that practically everyone has received an infection by the time they become adults.

In conclusion, we have outlined a single test method of using an intermediate solution of tuberclin PPD. We have shown the positive reactors by age groups in two large divisions, namely, those seen in clinic service and those tested in school-wide surveys. An attempt has been made to explain the differences in the percentage of reactions obtained in various schools including the presence of tuberculosis in the school, the relation of density of population to infection rate and the influence of the foreign element on the incidence of infection. We have shown the gradual increase in the infection rate among three five-year age groups and the negligible difference between the two sexes. We have further shown that the concentration used is not too strong, as evidenced by the small number of four plus reactions, and yet strong enough to be used as an efficient medium for screening out the uninfected and for determining an accurate infection rate.

—JKMS—

An important phase of medicine is the ability to appraise the literature correctly.—Hippocrates.

—JKMS—

The pomp and dignity of the medical art is less seen in neat and elegant formulae than in the cure of disease.—Sydenham.

ACTION CURRENTS IN SCHIZOPHRENIA

R. W. ROBB, M.D.

Osawatomie, Kansas

For the past six months, in the Osawatomie State Hospital, we have been investigating action currents in psychotic patients. We have found a significant differential variation in the action current records of patients having any of the various types of schizophrenia and those having a manic psychosis. This variation can also be detected in a reduced form in the records of normal individuals and can possibly be regarded as an indicator of the different types of personality. We have also found that these action currents could be modified by certain drugs and that with the change in the action current pattern there was a corresponding change in the clinical symptoms.

It is the purpose of this paper to make a preliminary report on the occurrence of these distinctive action currents in schizophrenia, and the method used in obtaining and recording them. We feel that the recognition of this peculiar electrical activity may give some insight into nervous activity in schizophrenia, may be of value in differential diagnosis, and may also be of assistance in pharmacological studies in the functional psychoses.

It would seem that every approach had been made to the problem of schizophrenia; but, so far as we know, there has been little study of electrical changes in this condition with the exception of study in chronaxia and in skin resistance as measured by the psychogalvanometer.

"Nerve impulses are invariably associated with action currents. One is never found without the other."[1] A method for detecting and analyzing nerve impulses would therefore give valuable insight into the study of disturbed function as seen in the psychoses.

One of the first studies made by this method was at Johns Hopkins by Stanley Cobb[2] about 1918 and reported by him in the Archives of Neurology and Psychiatry. He made a study of hysterical and organic tremors and was able to differentiate between the unconscious voluntary tremors of hysteria and the tremors of Parkinson's disease. Meyers[3] has reported a study of nystagmus by this method. One of the most important physiological studies based on action currents, one of the most far-reaching in its implications, was carried out by Travis[4] and his co-workers in the University

of Iowa. His work was directed toward a study of nerve impulses in stuttering and has been reported in a series of articles in the Archives of Neurology and American Journal of Physiology. Lindsley[5] reports an interesting study in myasthenia gravis. Golla[6], Adrian[7], and his co-workers have made an extensive study of action currents arising in nerve tissue. Most of the work done has been in normal subjects and were matters of physiological research. In Germany, Hans Berger[8] has discovered an action current peculiar to the cerebrum. He discovered this in 1924 and reported it again in 1929, and in several subsequent articles gave further development of his discovery. His findings have been substantiated by Adrian and Matthews of England. Adrian[9] reported the finding of the "Berger Rhythm" to the American Neurological Society at its meeting in Washington last year and has a later report in "Brain."[9]

Last summer Dr. Herbert Shuey, in making some cardiographic records in connection with his personality studies in mental cases, noted a number of records with very rough and irregular base lines. These are often seen in electrocardiograms and have heretofore been interpreted as due to defects in the instrument or to electrical interference. The records were correlated with his other studies of personality and it was found that there was a constant difference between the base line records of individuals in the primary or extroverted group and those in the secondary or introverted group. This observation was the stimulus for a very interesting and intriguing study concerning which this is a very abbreviated, preliminary report.

We are convinced that the cardiogram as recorded by the present-day electrocardiograph represents a great deal more than the record of cardiac activity. Every form of biological activity is accompanied by slight changes of electrical potential. So far, there has been little study of the base line in these records, for cardiographers have been interested only in the P. Q. R. S. and T. waves which represent the changing electric potential due to the action of the heart. The fact that these other variations are of slight intensity, do not occur in all records, and are not connected with cardiac activity has caused them to be regarded, if considered at all, as due to some defect in the instrument or to outside interference. There are scarcely any reproductions of electrocardiograms that do not include some of the characteristics fluctuations to which we refer. This irregular base line means something. The heart is not the only portion of the body which produces action currents. The contraction of the heart occurs with regularity and similarity. The action currents produced by its activity as recorded are outstanding and attract the attention of the most casual observer. The cardiologist gets what he wants when he gets a record of the cardiac waves and their time relationship, but it is always profitable to read between the lines. The electrocardiogram is a record of the sum total of action currents occurring in the area from which the currents are led off. Every form of metabolism, in the larger sense, muscular, secretory, chemical, nerve impulses and psychic activity are evidenced by these action currents. The sensitive electrocardiograph detects these, amplifies them through a system of vacuum tubes in the same way that the radio detects and amplifies the waves from a broadcasting station with which it is in tune. The patient when connected with a cardiograph is in reality a broadcasting station—the electrodes being the antennae through which the instrument detects, amplifies and records the changes in electrical potential which accompany the activities of life. We feel that the irregular base line as recorded by the electrocardiograph is a distinctive thing, is a record of certain somatic forces whose activity and inter-relationship make up the personality. The basic difficulty in schizophrenia is the inefficiency of the instrument through which ideas are associated and through which satisfactory affective relations are maintained with the outer world. The constant fluctuation in the base line may be a record of the schizophrenic's ineffectual efforts to secure and maintain homeostasis, which is his outstanding characteristic.

The introverted, self-centered, suspicious individual has a rough, irregular base line. When these personality traits become accentuated as in the development of a psychoneurosis or schizophrenic psychosis we have a corresponding increase in the intensity of the base line variations. The extroverted individual who is in touch with reality, who has insight as to himself, has a smooth, so-called normal base line. When he develops a manic psychosis he still has a smooth even base line—the exact opposite of that which is found in schizophrenia. Figure 1 shows a typical schizo-

phrenic base line. This was taken from a cooperative catatonic, but one who is markedly seclusive and totally lacking in insight. She attitudinizes at times, balances on lines on the floor, and turns square corners.

In a series of over 600 records from eighty - seven psychotic patients we have never failed to get this characteristic base line in a case of schizophrenia. It occurs in all types—simple, hebephrenic, paranoid, or catatonic. It occurs in the stuporous catatonic, in the type showing waxy flexibility, in the resistive and negativistic types. One might interpret the irregularity in a negativistic or resistive patient as due to action currents produced by muscular contraction, but the records from a stuporous catatonic show the same thing. Other patients representing other types of behavior from apathy, indifference, cooperativeness, various degrees of complacency and self-satisfaction to the exalted egotism of the paranoid, all showed the same type of base line, the catatonics and paranoids showing perhaps a greater range of variation.

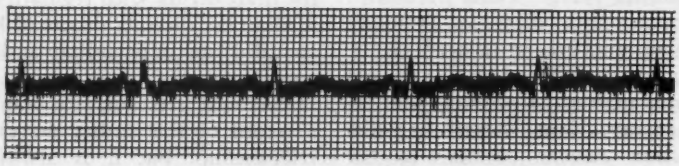

Figure 1. A typical schizophrenic base line.

We have used a group of eighty different patients who were schizophrenics. On some we have made as many as fifteen records taken at various times of the day and in different surroundings but with the same evidence of action current variation. The action currents recorded or shown in a cardiogram of a manic are smooth, resembling the ordinary record of a normal individual. We were handicapped in this study by having very few manics. We made records from five, two in manic phase and three in depression. All but one gave smooth base lines. This one was a typical text book picture of a maniac and was given this provisional classification. When first presented before the staff she had psychomotor activity, flight of ideas, a clear sensorium and apparent insight, but showed a typical schizophrenic base line. When tested by the Rorschach test she showed a marked degree of introspection. Three months later when before the staff for parole consideration, she showed no evidence of insight as to her condition. She was vindictive, said she had been framed and poisoned, and expressed other persecutory ideas. The staff opinions, written at this time and based on symptoms present then, favored a catatonicy classification.

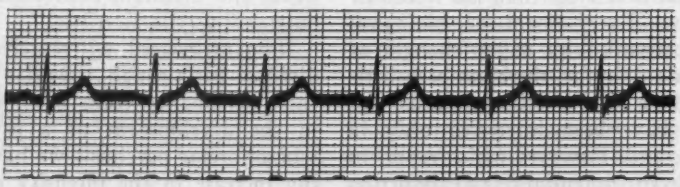

Figure 2. Base line generally found in manic psychoses.

We found the irregular base line in two psychoneurotic patients and in five employees who showed neurotic tendencies.

METHOD

The method employed was as follows: The instrument used was the Victor Electrocardiograph manufactured by the General Electric X-Ray Corporation. The electrodes were the ordinary 1x3 inch plate zinc electrodes provided with the machine. In order to insure a good electrical connection with the skin, we coated the electrodes with a paste made from K. Y. Jelly to which had been added KOH equal to one per cent weight of jelly and NaCl to twenty per cent. Electrodes were bandaged firmly to each part thus insuring uniformity of contact with all patients.

All records were taken with patients in supine position and in a quiet room. The instrument was protected from extraneous currents by operating it in a building remote from any electrical machinery and with the added precaution of cutting off the lighting circuit from the entire building. Records were taken many times from the same patients and taken at different hours of the day. In addition to the customary leads used in electrocardiography, we also applied the leads distal to the heart so as to eliminate it from the picture. Records taken with the electrode placed on each leg, bitemporally, or from glabella and occiput showed the same irregularity noted in the records taken from the customary leads.

The records taken with the electrodes on occiput and glabella were smoothed out by voluntary mental application and the records from legs were similarly affected by the induction of light spinal anesthesia.

In all we have taken some 600 records which seem to support our original observation. In analyzing the records we disregarded all waves making up the gross action of the heart, and only the fine fluctuations that made up the base line to the cardiographic record were considered.

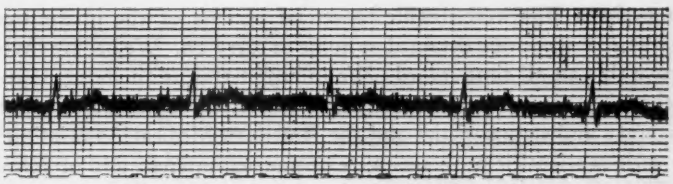

Figure 3. Base line of a typical catatonic.

We feel that the schizophrenic patient shows a distinctive action current pattern regardless of type or condition of muscular rigidity. It appears in the active, rigid catatonic and in the one showing waxy flexibility, in the simple type showing apathy and indifference, and in the alert, hyper-vigilant paranoid. We have never observed this pattern in the pure manic.

We next decided to test the effect of drugs to determine whether there might be any relation between improvement in clinical symptoms and variations in the action current pattern. Naturally the first drug tested was sodium amytal. We took a record from a mute, negativistic catatonic patient and immediately without changing electrodes began an intravenous injection of sodium amytal at the rate of 1½ grains per minute. A record taken three minutes after beginning this injection showed a definite improvement in the base line. This improvement increased with the patient's changed relationship with reality. We tested this repeatedly. As soon as a patient's emotional attitude was changed, as soon as he gained insight as to his condition the base line became smooth. This is shown in Figures 3 and 4.

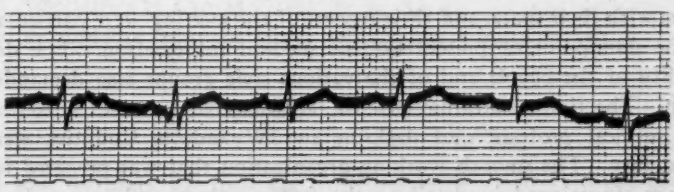

Figure 4. Same patient five minutes after beginning an intravenous injection of sodium amytal at the rate of 1½ grains per minute. No change in electrodes.

The next drug tested for its effect on the action current pattern was calcium chloride. We felt that the action currents might be modified by a change in the character of the electrolytes in the body fluids. This drug also produced a smoothing of the base line.

Other drugs tested by examination of action current changes were ephedrine, adrenalin, caffeine, bulbocapnin, acetylbeta-methylcholine, histamine, alcohol, and ether. We expect to study them at greater length. At the present time we are paying especial attention to the effects of calcium as it seems to produce definite improvement in the subjective and objective symptoms of schizophrenia.

Patients having hallucinations admit that these are minimized or completely removed. Those showing impulsiveness or hair trigger behavior are improved because reflex activity is slowed and time is given for reason and judgment to inhibit untoward behavior. Although the use of calcium was suggested by the electrocardiograph, the use of it is a separate study and will be reported at some future time.

We also studied in a few patients the action current changes produced by the intravenous injection of typhoid vaccine, with the attendant increase of metabolism incident to hyperpyrexia. The pattern changes brought about by various endocrines, by temperature changes, and by infection are also to be investigated.

We hope when the study is complete to be able to show that there is a distinctive pattern of action currents in the different types of personality, that these patterns are modified by the personality change incident to the psychoses, and that clinical changes brought about by various drugs having direct action on the central or vegetative nervous system are reflected in the action currents.

Our preliminary study made with the electrocardiograph leads us to believe that there are marked electrical potential variations in schizoids and schizophrenics which are not ob-

(Continued on page 248)

PRESIDENT'S PAGE

To the Members of The Kansas Medical Society:

Your attendance at the American Medical Association meeting by actual count was 1001. Our total membership at that date was 1440. Of that number perhaps 200 were unable to attend because of the infirmities of age, leaving but 239 who were detained at home to carry on. We believe investigation may prove this an all time record. We interpret this as an index of the intelligence, the scientific interest and the desire to actively participate in the benefits of the county and state societies and the American Medical Association.

The various scientific programs were of unusual interest, and of extraordinary merit. The open meeting with the distinguished guests present and an attendance of more than 12,000 was an inspiring thing. Short addresses of welcome were given by the mayor of Kansas City, the representatives of the Jackson County and Wyandotte County Medical Societies, the presidents of the Missouri and Kansas state societies, Governor Park of Missouri and Governor Landon of Kansas. The address of the Governor of Kansas deserves special mention. No member of the American Medical Association could have better outlined the desires of the profession than he did in his excellent address. We consider it a reflection of the sentiment of the profession of our state and of the American Medical Association, and it was most enthusiastically received. The installation in absentia of Dr. Tate Mason as president of the American Medical Association established a precedent. His address, which was presented by Dr. Kenneth M. Lynch of South Carolina, retiring vice-president, outlined the plans he had made for the coming year of his presidency, and was thoughtfully received. The absence of Dr. Mason left a tinge of sadness that was not erasable.

To attend a meeting of the American Medical Association House of Delegates is an experience long to be remembered. No one can perceive without such attendance the vast amount of important business that is transacted, and the efficiency with which it is conducted.

The scientific exhibits in kind, number and quality held the interest of everyone. The commercial exhibits were equally complete, and reflected every advancement of the year. One could have spent thirty days with great profit studying what was offered.

The newspapers of the two Kansas Cities and the press in general were generous with their space, and their reports of the meeting were particularly able from the standpoint of presentation of medical information. The delightful hospitality of the people and of the various civic groups also demands special mention. The fine auditorium offered facilities that are unexcelled.

The medical profession of Jackson and Wyandotte Counties were hosts extraordinary. The smooth working organization that was prepared for every emergency, functioned in detail to the fullest extent and was only possible through a year's work and preparation by that able group of men.

We are glad that our state was permitted to be co-host with Missouri for this great meeting, and we wish to express the hope that we may again have that privilege in the near future.

H. L. SYNDER, M.D.

EDITORIAL

THE PRESIDENT-ELECT

The House of Delegates of The Kansas Medical Society, in regular session at Kansas City, Kansas, on May 11, elected Dr. Jacob Franklin Gsell of Wichita as President-Elect of the Society for the year 1936-1937, and as President for the year 1937-1938.

The Journal wishes to congratulate the House of Delegates upon its choice. Dr. Gsell has maintained an active interest in the affairs of the Society for many years. His proven executive ability and his acquaintance with the organization and its purposes thoroughly qualify him for the duties of his new office.

By reason of the change in the Constitution and By-Laws adopted at the last meeting of the House of Delegates, Dr. Gsell will be the first President-Elect to serve for an entire year and the first President whose term will coincide with the fiscal year of the Society.

GOVERNOR LANDON'S ADDRESS OF WELCOME

The address of Governor Alf. M. Landon, delivered before the opening session of the American Medical Association at Kansas City, met with appreciative applause from the large audience assembled.

We quote in part from Governor Landon's address:

"Medicine will not willingly be made the servile instrument of politicians or the instrument of domineering bureaucracy. I predict that the typical American physician and organized medicine as a whole will at no time be ready for any scheme of regimentation, for any system of impersonalized medicine which is totally alien to the best traditions of the American practitioner and of the profession as a whole.

"The American practitioner will not be a party to destruction of that individual, personal service which has been the occasion of a special and justifiable pride. Whatever further advances are made in the broadening of medical service—there will be an abundance of them—will be made, in accordance with the fundamental conditions of previous achievements.

"A nation that can maintain and even elevate its medical standards and the state of public health in the trying years of a prolonged depression, needs to make no apology for the quality and the reach of its medical facilities.

"That condition itself is a tribute to the American physician in his continued unselfish devotion to a worthy task. May you long abide in your loyalty to the ideal of individual, personal ministration.

"From the earliest days the general practitioner in America was, first of all, an individualist. The circumstances of his work made him that; but it was a fortunate situation for the people who needed medical care. It meant that they could have personal ministration, that there was an intimate relationship between physican and patient and that the sufferer became at once, and remained, the object of very special attention.

"Down to the present day American medicine has continued to be primarily individualistic. It is chiefly on that basis that it is to be distinguished from medicine in many foreign countries. I know very well the arguments for an extension of the best medical service to all groups of the American people. It is a worthy cause. It is enlisting the attention of the best brains of your profession. I have confidence that you will work it out."

Governor Landon has expressed in general terms the attitude of the majority of American doctors in their desire to preserve individualism in a period of social change.

DR. H. L. SNYDER'S ADDRESS OF WELCOME

The Kansas profession was particularly proud of the address of welcome given by its representative Dr. H. L. Snyder at the recent American Medical Association meeting. His talk which is reproduced below was filled with conviction that medicine is entitled to safeguard the public and the profession in the government of medical affairs:

"The Kansas Medical Society enjoys the opportunity to be co-host with Missouri for your entertainment in Kansas City. Recent years have brought their problems to the profession of our state as they have to every other portion of these United States. The very difficulties of the time have stimulated not only personal interest but a militant collective individualism in our Society to meet both the emergency and the future. The problems of legislation, the problems of medical economics, the various questions relative to Social Security have each been studied by well selected, interested committees who have displayed typical Kansas spirit, thoughtfulness, and originality in their approach. We have found the services of our full time secretary invaluable. Counsel from the executive offices of the A. M. A. has been very helpful.

We have been mindful of the fact that there has been a great group of people who have been handicapped. We have endeavored to meet their problems half way and to care for their ill in the same spirit that made the family doctor revered. In the belief that county and state organizations must solve their own problems, careful study has been given to the provision of medical care for different wage groups. Plans for the care of the indigent and semi-indigent, maintaining personal choice of physician, have been successfully carried out in several communities. We have learned that no one plan will fit every community. It must be one individual plan carefully worked out by the medical profession with the political authorities to a correct harmonious solution, ever mindful of the limitations of the tax budget.

It has been and is the policy of Kansas to require that those having the right to practice medicine shall be ethical, competent, and trustworthy. We have purged the State of some objectionable individuals.

We maintain a faith in the rights of the individual in life and of the state in politics. During three generations, Kansas has fought for individual freedom and warred against regimentation and the paternal interference of national politics. And, we propose to continue our independence in solving problems of profession and of state. I can confidently assure you (the profession of all America) that, if the battles for regimentation approach our borders, they will meet a resistance that is bred in the bone and fibre of a free, American people in a free state.

We are alive with anticipation for the wonderful scientific program which will be given at this meeting. We desire that the Association, as a whole, and that each individual member, shall so enjoy this meeting that you will wish to come again. We welcome you."

Dr. Snyder's message was enthusiastically received. In fact numerous interruptions of applause made it difficult for him to present the talk in its entirety.

BRINKLEY LITIGATION COMPLETED

Word was received on May 28 that John R. Brinkley's period of appeal from the recent decision against him in the United States Circuit Court of Appeals had elapsed and that, therefore, he has no further course of procedure open to him in his litigation to secure reissuance of his Kansas license to practice medicine. It was thought that Brinkley would probably appeal the case to the United States Supreme Court but apparently the many reverses he has experienced caused him to decide that further efforts are futile.

The above circumstance, therefore, marks the close of a series of lengthy court decisions beginning with hearings by the Shawnee County District Court, the Kansas Supreme Court and the Board of Medical Registration and Examination hearings in 1930 and continuing through the United States District Court and the United States Circuit Court of Appeals. As a matter of review, it is interesting to note that Brinkley did not win a single decision and that he received little or no encouragement in any of his practices.

The Kansas Board of Medical Registration and Examination, and Dr. J. F. Hassig, Dr. L. F. Barney, and Dr. C. H. Ewing, in particular, deserve a large amount of credit for their successful handling of this case. Although inconveniences and difficulties incidental to that end have been many, they should take pleasure in the fact that they have materially aided the medical profession in safe-guarding the interest of the public in the ethical practice of medicine and surgery.

LABORATORY

Edited by J. L. Lattimore, M.D.

The following notes are from papers delivered before the American Society of Clinical Pathologists at their Kansas City meeting on May 8, 9, 1936.

R. D'Aunoy, M.D., New Orleans, Louisiana: Lymphogranuloma Inguinale is the third most common venereal disease in the state of Louisiana. The disease is characterized by a suppurating inguinal gland. The greater number of cases heal within a few weeks. Some progress to extensive suppuration and necrosis. Many cases of rectal stricture are a result of this disease. The diagnosis is made by the intradermal injection of a small amount of Frei antigen. If positive, a red hyperemic area will develop within forty-eight hours, ranging in size from ten to forty mm. in diameter. Frei antigen is made by injecting material from a known positive case, intra-cerebrally in mouse, monkey, ferret, killing the animal in about a week, then making an emulsion of the brain. Surgery is the best known treatment of the disease. Frei antigen is accurate in 91.7 per cent of cases.

W. D. Stovall, M.D., Madison, Wisconsin: The two usual methods of identifying B. Welchi are improved. The two usual methods are, injecting material from lesion into a rabbit, kill the animal in four hours and place the body in an incubator overnight, then examine the liver for typical lesions. Plant some of the suspected material into milk, vaseline the surface and place in incubator and watch for typical gas formation. Recommendation is made to add .7 grams of fresh tissue to the milk media, also three to five mgm. of reduced iron. Contaminators are held down and more rapid gas formation is stimulated.

Kano Ikeda, M.D., St. Paul, Minnesota: Report of two cases of primary bronchiegenic moniliasis. Finding the monilia are very common in pathological lesions of the lung and it has been considered that monilia are not primary factors. Ample proof in these two cases sustained the diagnosis.

O. A. Brines, M.D., Detroit, Michigan: Presented seventy-three cases of bronchogenic carcinoma, found in 3000 consecutive autopsies. Such conditions have been considered very rare in the past.

Clyde Brooks, M.D., New Orleans, Louisiana: Presentation of a technic using a microsedimentation tube. Very important factors influencing the sedimentation rate are, temperature, delay in performing test and angle of tube. Cold temperature delays sedimentation rate, heat (incubator) increases the rate. Test should be done within a few minutes after collection of blood as delay gives various findings. The tube should be placed in an absolute vertical position, very slight angling of the tube gives erroneous results.

K. Yardumian, M.D., Pittsburgh, Pennsylvania: Fibrinonogen and lipids increase with increased sedimentation rates. Chlorides have no effect on the rate. Red count has no effect on the rate.

T. B. Magath, M.D., Rochester, Minnesota: Checking numerous technicians, physicians and senior medical students, the most accurate possible check on the total red count is 370,000. Factors of error that enter are the eye, collecting specimen, the pipette and the counting chamber. Ear blood is one-half million higher in red cells than venous blood. Oxalated blood.

causing shrinkage is not satisfactory for red counting.

Peter Vogel, M.D., New York City, New York: Reporting on 250 cases of sternal puncture. In some cases, definite diagnostic information is obtained in certain blood diseases, such as primary anemia and leukemia. Puncture is made directly into the sternal marrow at about the level of the third to fourth costal margin, using a rather large spinal needle. If more than 2/10th. cc. of marrow are removed, blood contamination results which has a tendency to mask the actual marrow picture.

G. Stillman, M.D., New York City, New York: A detailed study of preparation of intravenous glucose solution. Single distilled water is entirely satisfactory if the still is of proper construction and clean. Immediate sterilization is imperative. In the administration of concentrated glucose solution very slow injection is urged. Most reactions to intravenous medication is due to two factors, improper cleansing of rubber tubing and too rapid administration.

MEDICAL ECONOMICS

Edited by O. W. Davidson, M.D.
of the Medical Economics Committee

THE SOCIAL SECURITY ACT: RELATION TO PUBLIC HEALTH AND CHILD AND MATERNAL HEALTH*

EARLE G. BROWN, M.D.§
Topeka, Kansas

Enactment of the Social Security Act by the federal government has made possible the extension and strengthening of state and local health services. The Social Security Act is based upon the recommendation of the Committee on Economic Security appointed to study social and economic conditions. While the Social Security Act became a law in August 1935, appropriations for public health have only been made available since March 1, 1936.

The general title of the Social Security Act which received presidential approval on August 14, 1935, defines the purpose of the legislation as follows:

> "To provide for the general welfare by establishing a system of federal old-age benefits, and by enabling the several states to make more adequate provision for aged persons, blind persons, dependent and crippled children, maternal and child welfare, public health, and the administration of their unemployment compensation laws; to establish a Social Security Board; to raise revenue; and for other purposes."

The Social Security Act provides federal old-age benefits and grants to the states for old-age assistance; unemployment compensation administration; aid to dependent children; aid to the blind; maternal and child welfare and for public health work. The Act provides grants to states for aid in maternal and child welfare and in the development and maintenance of state and local health services, with an additional annual appropriation to the United States Public Health Service for research activities.

In Title V, Grants to states for Maternal and Child Welfare, provision is made for assistance in the maintenance of maternal and child health service; services for crippled children; child welfare services and for vocational rehabilitation.

In order to administer the grants relating to all services other than public health and child and maternal health services the act provided for a Social Security Board, composed of three members. The Children's Bureau has the responsibility of the administration of grants for maternal and child health service; services for crippled children and child welfare service. The Office of Education of the Department of the Interior will administer those funds relating to Vocational Rehabilitation and the Public Health Service has the responsibility of administering grants to states for aid in establishing and maintaining state and local health services.

It is to be presumed that each of the various titles in the Social Security Act has some relation to health. However, our purpose in presenting this discussion is to give consideration to those provisions which deal with public health and maternal and child health services.

Authority for public health work is contained in the following:

> "Section 601. For the purpose of assisting states, counties, health districts, and other political subdivisions of the

*Read before the Twenty–Fifth Annual School for Health Officers and Public Health Nurses, at Topeka, April 6–7, 1936.

§Secretary, State Board of Health.

states in establishing and maintaining adequate public-health services, including the training of personnel for state and local health work, there is hereby authorized to be appropriated for each fiscal year, beginning with the fiscal year ending June 30, 1936, the sum of $8,000,000 to be used as hereinafter provided."

Section 602 provides allotments to the states for improvement of state and local health work shall be made by the Surgeon General of the United States Public Health Service. The amount of such allotments shall be determined on the basis of: (1) Population; (2) special health problems; and (3) financial needs. Further provision is made that the apportionment of such funds will be within the jurisdiction of the Surgeon General who shall certify the designated amount to the Secretary of the Treasury. The Act specifically states that the funds allotted shall be paid to the states and that the Public Health Service will deal only with State health authorities.

Grants to states for maternal and child health services are provided in Sections 501 and 502 (a) and (b) as follows:

"Section 501. For the purpose of enabling each state to extend and improve, as far as practicable under the conditions in such state, services for promoting the health of mothers and children, especially in rural areas and in areas suffering from severe economic distress, there is hereby authorized to be appropriated for each fiscal year, beginning with the fiscal year ending June 30, 1936, the sum of $3,800,000. The sums made available under this section shall be used for making payments to States which have submitted, and had approved by the Chief of the Children's Bureau, state plans for such services."

"Sec. 502. (a) Out of the sums appropriated pursuant to section 501 for each fiscal year the Secretary of Labor shall allot to each state $20,000, and such part of $1,800,000 as he finds that the number of live births in such states bore to the total number of live births in the United States, in the latest calendar year for which the Bureau of the Census has available statistics.

"Sec. 502. (b) Out of the sums appropriated pursuant to section 501 for each fiscal year the Secretary of Labor shall allot to the states $980,000 (in addition to the allotments made under subsection (a), according to the financial need of each state for assistance in carrying out its state plan, as determined by him after taking into consideration the number of live births in such state."

The Chief of the Children's Bureau shall approve any state plan which complies with the requirements as contained in Section 503 (a):

"Sec. 503. (a) A state plan for maternal and child-health services must (1) provide for financial participation by the state; (2) provide for the administration of the plan by the state health agency or the supervision of the administration of the plan by the state health agency; (3) provide such methods of administration (other than those relating to selection, tenure of office, and compensation of personnel) as are necessary for the efficient operation of the plan; (4) provide that the state health agency will make such reports, in such form and containing such information, as the Secretary of Labor may from time to time require, and comply with such provisions as he may from time to time find necessary to assure the correctness and verification of such reports; (5) provide for the extension and improvement of local maternal and child-health services administered by local child-health units; (6) provide for cooperation with medical, nursing, and welfare groups and organizations; and (7) provide for the development of demonstration services in needy areas and among groups in special need."

Each year the Surgeon General of the United States Public Health Service holds a conference with state and territorial health officers. The 1935 meeting was held in Washington, D.C., on June 17 and 18, and the Surgeon General presented for the consideration of the conference a suggested program which would serve as a basis for regulations to be adopted covering the allotments and payments to the states. The conference made minor changes in the suggested program and recommended to the Surgeon General that the program as amended be adopted. Members of this conference also met with officials of the Children's Bureau on June 19, 1935, and made certain recommendations to the Chief of the Children's Bureau regarding the program for maternal and child

health services. The conference adopted the following recommendations, in part, concerning the allocation and payment of funds to the states by the United States Public Health Service.

"The protection and promotion of the public health has long been recognized as a responsibility of government. In the United States, however, this responsibility has not generally been discharged in a systematic and adequate manner as have other functions of government such as the protection of property, the provision of means of communication, or the administration of justice, and education. Furthermore, there is a marked inquality in the health service now being rendered to different communities, which results in great differences of opportunity for citizens to acquire and maintain health. This condition has been brought about by:

"(1) Lack of adequate state and local services for organized health protection,

"(2) Lack of appreciation and understanding on the part of citizens of the measures necessary to preserve and promote individual health, and

"(3) Lack of ability of citizens and communities unaided to secure needed preventive services.

"It is the aim of the Economic Security Act, among other purposes, to stimulate a comprehensive, nation-wide program of public health, financially and technically aided by the Federal government, but supported, so far as possible, and administered, by states and local communities."

PURPOSE OF ALLOTMENTS TO STATES

"The $8,000,000 annually appropriated for aid to states will be available for the following purposes:

"(1) Aid to states and territorial health departments for strengthening the service divisions and in providing adequate facilities especially for the promotion and administrative guidance of full-time city, county and district health service,

"(2) Aid through state and territorial health departments for the development of city, county and district health departments,

"(3) Training of public health personnel.

"However, no state or territory shall be eligible for aid unless and until it shall have provided or provides in its proposed plan for certain essentials of health organization hereinafter set forth.

"Grants in aid to existing state or local projects will be supplemental to funds now being expended, and in no case may such grants be used to replace existing state or local appropriations to such projects for the purpose of relieving state or local authorities from expenditures now being made.

"I. AID TO STATE AND TERRITORIAL HEALTH DEPARTMENTS

1. Although it is recognized that many states and territorial health departments conduct a number of important specialized activities, for the purpose of allocation of funds under this Act, no state or territorial health department shall be regarded as properly organized which does not provide as a minimum on a full-time basis the services listed below:

a. A qualified full-time state or territorial health officer.

b. Adequate provision for the administrative guidance of local health services.

c. An acceptable vital statistics service. This shall include an approved plan for the registration of births and deaths and the prompt forwarding of information relative thereto to the Public Health Service.

d. An acceptable state public health laboratory service.

e. Adequate services for study, promotion and supervision of maternal and child health.

f. Special services for the study, promotion and guidance of local activities for the control of preventable diseases and for health promotion. This shall include an approved plan for the collection of reports of notifiable diseases and the prompt forwarding of information relative thereto to the Public Health Service.

g. Services for study, promotion and supervision of environmental sanitation.

"Provided: That exceptions to this requirement may be made where it shall be determined by the Surgeon General that one or more of these services are

uneconomical or unprofitable in a given state."

Recommendations were made regarding the allotment of funds toward the establishment and maintenance of city, county or district health services, with the basic principles of organization and services as follows:

"1. The public health services of the city, county or district shall be under the direction of a whole-time health officer.

"2. The personnel of the city, county or district health department should include, in addition to the full-time health officer, such medical assistants, public health nurses, sanitation officers and clerks as will insure at least a minimum of effective health service commensurate with the population and health problems of the area concerned."

The success of the Social Security Act in the field of public health and maternal and child health will depend upon the availability and employment of competent and trained personnel. Therefore, the conference adopted certain standards for medical officers, public health engineers, nurses, sanitarians and sanitary officers. Requirement was made that candidates for appointments shall not be more than thirty-five years of age when specializing in public health work, and that personnel already selected shall have had or shall agree to take before assuming their duties not less than three months of special training in public health. The standard of qualifications for medical and nursing personnel were harmonious with the standards and educational requirements made by the Committee on Professional Education of the American and Medical Association of the National Organization for Public Health Nursing. At the conference with the Children's Bureau, plans were approved for the development of maternal and child health programs in the furtherance of a general program of maternal and child health. It was decided that special consideration should be given to:

"(a) to local services for children and mothers, services to be administered by local public-health units with the use of combined local, state, and federal funds; (b) to conditions in rural and other specially needy areas; (c) to the development of demonstration services or services of a more nearly permanent character in localities in special need, and (d) to the development of adequate divisions of maternal and child health in state departments of health that can provide the leadership and administrative assistance necessary to develop local services. Furthermore, in such a program, though the lives and health of mothers, infants, and young children may be considered as a major responsibility attention must also be focused on the physical and mental health needs of children of all ages, especially on those problems that have to do with mental health and its relation to delinquency, with the health of adolescents in school or of youths who are seeking employment or are already in industry, with the health needs of special groups of children, such as children who are physically or mentally handicapped, children in institutions or foster homes, children in families in which the father is dead or absent from home because of illness or desertion, children in families on relief rolls."

The conference considered in planning a local program for mothers and children that special consideration should be given to rural areas and small centers of population. Provision was made for cooperation with medical and other professional organizations and with social welfare, educational and home economic groups. The same minimum educational requirements for professional workers were adopted as for those engaged in general public health work.

For the respective states receiving aid in both public health and child and maternal health services requirements were made that the state health officer should submit detailed plans of the organization of the department outlining the program for the state and submit proposed budgets to the Public Health Service and the Children's Bureau.

The Kansas State Board of Health desiring to cooperate with various organizations interested in health, at its annual meeting on June 28, 1935, created an Advisory Committee, the members being appointed by the presidents of the respective organizations, as follows:

F. L. Loveland, M.D., Topeka, Barret A. Nelson, M.D., Manhattan, Kansas Medical Society.

David T. Parkinson, D.D.S., Wichita, Kansas State Dental Association.

Ann Washburn Wick, R.N., Wichita, Kansas State Nurses Association.

Paul C. Carson, M.D., Wichita, American Academy of Pediatrics.

George I. Thacher, M.D., Waterville, Kansas State Board of Health.

Two additional members have been added to the original committee, including: John G. Stutz, Director of the Kansas Emergency Relief Administration and L. A. Calkins, M.D., Professor of Obstetrics of the University of Kansas School of Medicine and member of the Executive Committee of the American Maternal Welfare Association.

Limited time permits only a brief discussion of the Kansas plan for the administration of public health and maternal and child health services under the Social Security Act. The program for maternal and child health was submitted to the Children's Bureau on December 30, 1935, and Miss Katharine Lenroot, Chief, advised of her approval under date of February 17, 1936. The program for public health was submitted to the Public Health Service under date of January 27, 1936 and was approved by the Surgeon General on March 7.

Primarily we believe the interest of this group will be in: (1) Provision for the training of personnel; (2) extension of public health services, and (3) provision for maternal and child health work.

TRAINING OF PERSONNEL

In the past in many of the states there has been unrest in local and state health departments due to the policy of making frequent changes among the personnel. It is recognized, of course, that interference with plan and frequent changing of personnel prevents the greatest amount of work being accomplished. We believe that all will agree public health work is a definite profession and that a career in this profession should be as attractive and permanent as in any other profession or field.

In order to provide a trained public health personnel a total of fifteen per cent of the $8,000,000 appropriated was set aside for the training of personnel. The conference recommended the United States Public Health Service should develop adequate training centers in existing institutions and conveniently located to serve certain groups of states. It was further suggested that the funds allotted to the various state departments of health should be in accordance with their needs as certified by the state health officer for the purpose of paying living stipends, tuition and travel expenses of trainees. The selection of the public health trainees is made by the state department of health and those who have completed the special training courses will have priority in their selections for state and local positions.

To date, two medical schools have been designated to give short courses in public health work for medical trainees, namely: Vanderbilt University School of Medicine at Nashville, Tennessee, and the University of Michigan at Ann Arbor. Five universities and colleges have been accepted by the Public Health Service as having satisfactory requirements for public health service training for white nurses, as follows: University of Minnesota at Minneapolis; University of Michigan at Ann Arbor; Western Reserve University at Cleveland; Peabody College at Nashville, Tennessee; and Teachers College, Columbia University at New York City. In addition, St. Philip School of Nursing of the Medical College of Virginia at Richmond, has been designated as a training center for colored nurses.

We have not as yet received any information regarding short courses for sanitary engineers; sanitarians or sanitary officers. We are informed that the Public Health Service will provide a short course in industrial hygiene to be given at Washington, D.C., beginning May 18.

A total of $4,775 was allotted to Kansas for the five-month period February-June, 1936, for the training of public health personnel.

These funds are being utilized for the training of three public health nurses at the University of Minnesota, and one colored nurse at St. Philip School of Nursing. Two physicians began their post-graduate courses at Vanderbilt University and one at the University of Michigan, on April 6. Provision has been made for the enrollment of two sanitary engineers in a post-graduate course for nine months in one of the eastern universities beginning next September. One of these engineers has been named as the Industrial Hygiene Engineer in the Division of Sanitation of the State Board of Health.

MATERNAL AND CHILD HEALTH SERVICES

The plan for the extension of maternal and child health service includes provision for ad-

ditional personnel to the state health department including an assistant to the director of the division; a full-time dentist who will be director of the division of dental hygiene which was created by a resolution adopted at the quarterly meeting of the State Board of Health, held on March 25, 1936; two consulting nurses; an educational director; and a nutritionist.

Among the services contemplated under the program are provisions for district meeting of health officers and public health nurses; refresher courses in pediatrics and maternal hygiene, the continuation of the policy of previous years in providing speakers for teachers institutes and also addresses by members of the staff to school children, Parent Teachers' Associations and other organizations.

The educational service provided on maternity and child-bearing will be increased to provide additional literature dealing with this subject. Prenatal clinic service will be provided for certain cities and villages and for rural communities. Such service, however, will only be established in cooperation with the local county health officer and the local county or district medical society. The service will be limited to those mothers who cannot employ a private physician. One county will be selected for a special demonstration in an attempt to lower existing high infant and maternal mortality rates. Two nurses will be provided in this county to work under the direction of a committee appointed by the local medical society and the nurses will be available for assistance to the physicians during delivery as well as for prenatal and postnatal calls.

Literature relating to the infant, pre-school and school child will be available in addition to certain limited publications available at the present time. It will also be possible to develop a limited number of well baby, pre-school and school conferences in cooperation with the local health officers and the local or district medical society. Immunization against diphtheria and vaccination against smallpox will be made possible in these communities through payment of a fee to physicians for this service.

PUBLIC HEALTH WORK

On basis of the allocation to the various states for public health work during the present fiscal year, Kansas was entitled to $105,398. Of this amount, $35,115 was to be matched with new money but since new funds were not appropriated these funds could not be matched. Deducting this amount, Kansas was entitled to receive the proportionate share of $65,023, but since the money was not available until the first month of the second quarter, the allotment to Kansas was $27,092. This total of funds did not include $4,775 allotted for the training of public health personnel.

A total of $1,600,000 was allotted to the various states on the basis of financial needs. Of this total, $400,000 was made available as a flat allotment, each state receiving its proportionate share of $7,843.00. In Kansas this fund is being used for further extension of local health service in the employment of a director.

The Kansas plan includes provision for strengthening the Division of Sanitation through the addition of an industrial hygiene engineer, provision for this travel and the purchase of certain equipment.

The work of the public health laboratory will be extended thru the establishment of two district laboratories where all tests relating to public health will be made with the exception of Wassermann and Kahn tests which will still be run in the central laboratory. The first district laboratory will be established in southeast Kansas and serve those physicians in that section of the state.

Mr. Raymond Leach, a graduate of the University of Kansas, and one of the technicians in the central laboratory for the past six years will be in charge. The necessary equipment has been purchased and it is contemplated the laboratory will be ready for service within the next few days.

Provision was made with approval given by the Public Health Service for the employment of a full-time director of the Division of Venereal Diseases and also for the employment and travel of a milk sanitarian.

Financial assistance will be given to the department of health of the city of Kansas City when the full-time health officer is appointed and also to the city of Topeka. Certain funds have been allotted to Lyon, Sedgwick, and Shawnee counties and provision has been made for funds for assistance to at least two full-time county or district health departments to be developed.

Dr. C. E. Waller, Assistant Surgeon General, U. S. Public Health Service, in an address before the American Public Health Association at Milwaukee, in 1935, called attention to the fact that it is necessary for the Congress to

appropriate Social Security Act funds each year, and that without doubt Congress will be influenced by evidence of efficient administration and accomplishment, or by the lack of it. If the accomplishment should justify it, there is a possibility the government may even increase its participation in the future.

The United States Public Health Service has placed on the various states the responsibility for organization of the work and for qualifications of personnel. Therefore, it is the responsibility of the states to demonstrate to the Congress that the grants from the federal government are being wisely expended. That demonstration may be made by translating the provisions of the Act into action.

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ACTION CURRENTS IN SCHIZOPHRENIA*

(Continued from Page 237)

served in other types of personality, and that these are sufficiently constant to have differential diagnostic value.

Previous studies in action currents have generally been made with highly complicated and temperamental apparatus. The modern electrocardiograph offers an instrument which is standardized and in which the factors of individual resistance in different patients can be eliminated. Its application is simple, it is easily available for use, and the findings of one observer can be accurately checked by any other using the standard instruments.

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*Presented before the Missouri–Kansas Neuropsychiatric Society, December 11, 1935.

OFFICIAL PROCEEDINGS

78th Annual Meeting

The House of Delegates met in regular session at 2:00 P.M. on May 11 at the Chamber of Commerce Building in Kansas City, Kansas. Dr. H. L. Snyder, President, served as presiding officer.

Upon motion of Dr. L. E. Growney the minutes of the last meeting were approved as printed in the Journal.

Dr. J. F. Gsell moved that all reports be briefly summarized at this meeting and printed in detail in the Journal. Seconded and carried.

Dr. H. L. Chambers, Secretary, presented the following report:

To the President, Councilors and Delegates:

The way things have developed, there is no definite statement in or among our laws as to what are the exact duties of the Secretary. By a process of common consent, I am leaving the most of the statistical matter as well as the matter of records to Executive Secretary Munns. This development makes me neither a statistical nor a recording but rather a constitutional secretary—whatever that is.

On this account, I am passing by the election and other business as transacted at Salina. You know all about it already. Also the recording and reporting of what has been done at the meetings of the Councilors, the various Committees and the acts of the various officers seems properly to belong in the office of Secretary Munns and he is covering it in his annual report and in the issues of the Journal.

I deem it proper to make some discussion of the membership here. As I write this—May 8—the membership is 1417. It is stimulating and encouraging to compare this with the 1394 at the beginning of May, and even more so to compare with the 1285 we had on the same date in 1935 or the 1171 in 1934. However, I hasten to point out that this is no time to become chesty or to relax in any way in the effort to increase the membership and to utilize the power that membership gives to get things done for the profession. Perhaps the chief reason for the increase in membership is the conviction in the minds of many that the medical profession needs organization to protect itself. This increase, then, is to be construed as also an increase in the responsibilities of those who have been selected to manage the affairs of the profession. I am not even sure that the responsibilities do not increase faster than the membership does.

Since coming into the room, I learn that the membership Saturday was 1440, which, I believe, is an all time record. Again I remind you that this represents an appeal for help and translates into an even greater increase in our responsibilities.

Three years ago this week, the Federal Emergency Relief Act was passed. Passing all discussion as to the wisdom of it, there is no reasonable doubt that the Congress intended the medical pro-

fession to benefit in its operation. Those who made the arrangements to administer it definitely and specifically provided for such consideration in regulation No. 7. Estimates on the amount due the profession in Kansas under this regulation per each year vary from $1,007,000.00 to $1,030,000.00. You know we did not get it nor scarcely any part of it and many of our members have actually suffered. The largest factor, I believe, in the increased willingness to join the society is the hope the doctors have that the organized profession can do something about the economic situation of which the federal betrayal is only a sample and index. The activities of our Committee on Economics seems to rationalize and to strengthen such hope.

Another factor in the increasing willingness to join and cooperate with the organized profession is the development of a somewhat different type of professional man. While the modern university trained medic is probably just as individualistic as the former preceptor trained one, he does have less fear and suspicion of his fellows, makes a consultation less of a bull fight, knows and more cheerfully admits his own limitations, suffers less from inferiority complexes and reacts less violently to them and all in all is much more cooperative and get-along-together-able. This all helps in getting the increase in membership.

I suppose a snake swallows a toad without personal animosity. One with a kindly disposition and a good imagination may even believe that he does it in a spirit of helpfulness—it surely is some protection to the swallowed batrachian—but the toad finds it a disquieting, even a terrifying experience. He just "doesn't want to." Now the sociologists and the socio-economists seem bent on making a snake and toad union with the medical profession and those of us who are fully awake are frankly terrified. This, I think, is another factor in our increase in membership, because, even the most individualistic would rather be swallowed up in the organized profession, than swallowed down by the social workers union.

You are getting individual reports from the various committees—all thirteen of them—except the Executive Committee, and will thus be able to live over the firing line experiences of the men who compose them. I have to say in general that the unusual alertness that shows up in the increase in membership is also reflected in the more than common activity among and in the Committees. After making due allowance for my own possible awakening from somnolence, I am still sure that the profession of Kansas is now more "up on its toes" than I have ever seen it before. This condition furnishes a solid background and support for the idea of more definite planning for long periods and the various committees are trying to promote it. It has been hoped that much of the committee work of this year will carry on into future years and not have to be repeated.

You all remember that The Kansas Medical Society was a going concern with considerable momentum when Dr. Hassig handed it over to the present administration. It is now obvious that Dr. Snyder and Mr. Munns have not permitted it to slow up any.

I close with another reference to the increased responsibility that comes on the officers because of the increased activity in the members and in the Committees. It would be a tragedy to let such loyal and energetic support go unappreciated and unmatched.

Dr. Geo. M. Gray, Treasurer, presented the following report:

To the House of Delegates:

As Treasurer of The Kansas Medical Society, I herewith submit my financial statement of funds received during the year from April 30, 1935 to April 30, 1936. On May 1, 1935, the standing of the funds was as follows: Defense Fund, $10,743.30, General Fund $8,434.75 and in the Journal Fund $442.90, making a total of $19,620.95.

During the fiscal year I received on January 8, 1936, a draft from the Merchants National Bank for $2,704.00, and also received dues from Dr. C. B. Johnson, Eudora, $8.00 and on January 20, 1936, $16.00 from C. G. Munns and on May 1, 1936, a draft from Merchants National Bank for $10,800.00, making a total amount received of $13,528.00 for the year. (Not including income of $2,860.00 allocated from the Defense Fund.)

There was expended for the year ending May 1, 1936, from the General Fund $11,713.89 and from the Defense Fund $1,989.78, making a total expenditure of $13,703.67, and the balance on hand May 1, 1936 was $19,445.28. The standing of the funds May 1 was as follows: Defense Fund, $8,753.52, General Fund, $10,691.76, balance on hand in both funds, $19,445.28. Vouchers drawn against the General Fund and paid during the year were in the amount of $11,713.89, and vouchers drawn and paid from the Defense Fund totaled $1,989.78.

For the past two years no part of the income has been added to the Defense Fund; consequently, it is depleted each year according to the amount of expenditures drawn against that fund. Just how far you wish to go in depleting the Defense Fund is a question that the House of Delegates should decide. I believe that under the resolution of Dr. O. P. Davis, adopted at the Wichita meeting, it was agreed that the General Fund amounts would be used in the General Fund expenses, until the Defense Fund was reduced to $5,000.00. This probably is a safe amount for the operation of the Defense Fund as it averages about the same each year. You had one rather large expenditure in the past year, which was paid from the General Fund, to O'Neil and Hamilton for services in the Brinkley case. There has been another trial since that settlement in another court, with services of O'Neil and Hamilton in connection with that trial, bill for which has not been so far rendered, but undoubtedly they will have a bill of some sort.

The next largest expenditure from the General Fund was incurred in the Cancer Control Program, which amounted to $749.37. In all probability, we will be requested to spend a like amount again this year.

During the past two years, the expenditures from the General Fund, with nothing deducted and added to the Defense Fund, have been slightly under the income, but if $2.00 per member had been added to the Defense Fund, your General Fund would not be able to support the expenditures.

Under the new arrangement for editing the Journal, we have found it best to maintain a Journal Fund in Topeka, and in order to carry on this function, $442.90, which was then in the Riverview Bank,

Kansas City, Kansas, as a Journal Fund, was transferred to the Central National Bank of Topeka on April 20, 1935, and from May 13 to July 15, 1935, the expenditures were handled by check signed by Clarence G. Munns. After July 15, when regular voucher form was adopted, which required the signature of the President and Secretary, and countersignature of the Treasurer, were used. I have received all these checks and vouchers from the Central National Bank of Topeka, and checked them with my records, and find them correct, a list of which is hereto attached, and becomes a part of this report. The total expenditures from this fund were $3,659.24.

According to the statement sent me from the bank, on April 30, 1936, you had a balance of $762.27 in the Journal Fund. Your executive secretary advises me that this fund has a somewhat larger balance than this, due to reserves and checks not yet cashed but in his hands, and an item of good accounts payable and included in the April issue of $50.20, which according to his estimate, would make the balance on hand in the Central National Bank in that account $1,109.76. This amount then should be added to the $19,445.28 in the General and Defense Funds, which would make the total funds of the Society on hand in the Central National Bank in Topeka and the Riverview State Bank of Kansas City, Kansas, of $20,555.04. It seems to me that as long as your Treasurer resides outside of Topeka, this is the most desirable way to handle the funds.

At the present time no expenditures are made except by regular voucher form, signed by the President and Secretary and counter-signed by the Treasurer, except the Defense Fund, where under the new organization those vouchers are signed by the President and countersigned by the Treasurer and Dr. O. P. Davis, as Chairman of the Defense Fund. I notice among these vouchers that one issued on August 22, was not signed by Dr. Davis, but it went through o.k. Dr. Davis may not have a record of this voucher, but it is No. 214, payable to O'Neil and Hamilton in the amount of $75.00.

Standing of Funds May 1, 1935:		
Defense Fund	$10,743.30	
General Fund	8,434.75	
Journal Fund	442.90	
Total	$19,620.95	
Credits:		
Jan. 8, 1936, Merchants Nat. Bank, Topeka (Dues)	$ 2,704.00	
Jan. 15, 1936, Dues from C. B. Johnson, Eudora	8.00	
Jan. 20, 1936, Cash from Clarence G. Munns, Secy.	16.00	
May 4, 1936, Dues from Secretary	10,800.00	
Total	$13,528.00	$33,148.95
Expended for year ending May 1, 1936:		
General Fund	$11,713.89	
Defense Fund	1,989.78	
	$13,703.67	
Balance on hand May 1, 1936		$19,445.28
Standing of the two funds May 1, 1936:		
Defense Fund	8,753.52	
General Fund	10,691.76	
		$19,445.28
Journal Fund		762.27
Total		$20,207.55

(A list of individual vouchers issued during the year is officially filed at central office, and available for inspection by members.)

Dr. O. P. Davis, Chairman of the Defense Board, submitted the following report:

To the House of Delegates:

Your Medical Defense Board submits the following report of its operations during the past year, including the report of its legal department, which is attached as a supplement.

There have been ten new cases filed since our last report. Of all the cases, old and new, there are now pending for trial six cases. There have been five cases won for our defendant members; one case lost, which has been appealed by us to the Supreme Court. One case is expected to be appealed by a defeated plaintiff. Nine cases have been dismissed, either on demurrer or for lack of prosecution. Three cases have been settled by the insurance carrier. We are opposed to settlement or compromise, as a rule, but we cannot always prevent it, when an insurance carrier is associated in the case.

The expenditures of the Board for the year have been $1,989.78, which is $340.12 in excess of the previous year. It is obviously impossible to forecast the expenditures of any year. The number of new cases is always problematical, and the distribution of the cases with reference to the distance from Topeka, the nature of the cases as to the validity of the charges, and the delays, continuances and subterfuges so commonly incident to legal procedure are all factors in the cost of defense. The average accusation of malpractice is nothing else than legal blackmail, and it is a part of the nefarious scheme to make it as expensive as possible for the prospective defendant, in the hope that he will come across with a liberal proposition of settlement.

Medical defense in our society has cost, during the past twenty-two years, an average per year of $1,548.76. In each of the years 1926, 1929 and 1930, it cost a little above $2,000.00. 1919 was our cheapest year, costing $759.41. As usual, a table is shown at the end of this report, giving the expenditures, year by year, for the past twenty-two years.

For a long time there has been an ample surplus in the Defense Fund. This surplus gave the Board a very comfortable feeling in times when there were unusual demands on our resources. We felt that we could afford to fight every case to a finish without too much concern as to the cost or whether we could meet the bills. Medical defense, like war, is usually costly. Yet a just war must be won, at any price, and so must our lawsuits in defense of our members. During the past year all defense expenses have been paid out of our accumulated surplus, the usual defense assessment being omitted. It is intended, under the proposed new Constitution, to turn all the existing surplus into the general fund, to discontinue the defense per capita assessment and provide for all defense activities by a budget apportionment from the funds raised from the regular annual dues. This will be all right, provided a liberal policy is followed in making such apportionment. If, however, there develops a parsimonious disposition in dealing with this

department, we may as well get ready at once to go out of the defense business. It cannot succeed if pursued on a pinch-penny basis.

We desire to express our satisfaction with the efficient services of our attorney and counsel, Mr. John Hamilton. Mr. Hamilton has been on leave for the past several months. During his absence the legal work has been competently carried on by his partners, Mr. O'Neil and Mr. Griffith.

The Chairman of this Board wishes to interpolate a personal remark in conclusion. Last year, at Salina, he supposed that his connection with this enterprise was at an end. He even sang his "swan song". He found, a few days later, that this supposition was erroneous. By what sort of legerdemain this was accomplished has not been made clear. He still thinks his present connection with the Board is extra-legal and unconstitutional. However, he has so much interest in this 25-year-old pet that he is willing, at any time, to do whatever he can in its behalf, and appreciates the very spacious and insupportable allegations some of his friends made when they thus succeeded in temporarily re-attaching him to this Board.

Defense Board Expenditures—22 Years

1915	$ 1,254.95
1916	1,189.27
1917	777.45
1918	809.58
1919	759.41
1920	1,245.51
1921	1,458.35
1922	1,236.08
1923	1,310.96
1924	1,479.76
1925	1,970.05
1926	2,008.13
1927	1,981.03
1928	1,949.02
1929	2,279.43
1930	1,549.54
1931	1,759.86
1932	1,812.84
1933	1,583.60
1934	2,093.47
1935	1,649.66
1936	1,914.78
Total, 22 years	$34,072.73
Average per year	1,548.76

Dr. O. P. Davis, Chairman,
Medical Defense Board,
The Kansas Medical Society,
Topeka, Kansas. April 24, 1936

Dear Doctor Davis:

"We enclose herewith the annual summary of cases made up in the usual form which we have heretofore employed, covering the period of April 1, 1935 to April 1, 1936.

The case decided during the above period which we think is of the most importance to medical jurisprudence is that one decided in March, 1936, by the Kansas Supreme Court. Heretofore in cases of malpractice, where more than two years had elapsed since the alleged negligence it was the practice of attorneys to file a petition in which they alleged that the doctor orally contracted to perform a certain treatment and that he breached his contract in his negligent treatment. On this theory they attempted to apply to their case the three year statute of limitations applicable to oral contracts. By reason of the decision in this case this is no longer possible in the State of Kansas. The syllabus in the case reads as follows:

'Malpractice—Action of Contract or Tort—Limitations. The petition considered in an action by a patient against a surgeon for damages consequent on acts of the surgeon in failing to perform an operation according to proper surgical practice, and held, notwithstanding the petition was in form one for breach of contract to perform the operation in accordance with proper surgical practice, the gravamen of the action was malpractice, which is a tort, and the action was barred by the two-year statute of limitations.'

Yours very truly,
O'Neil, Hamilton & Griffith,
By Barton E. Griffith."

(A detailed list of cases handled during the year is officially filed at the central office and available for inspection by members.)

Dr. W. M. Mills, Chairman, presented the following report on behalf of the Editorial Board:

To the House of Delegates:

The Editorial Board submits the following report on behalf of the Journal for the period from May 1, 1935 to May 1, 1936.

A financial statement which takes into consideration all income and expense to and including the April issue shows the following condition:

I.		
Cash on hand, May 1, 1936		$ 475.50
II.		
Income During the Year		
Advertising	$3,934.02	
Subscriptions	71.50	
Miscellaneous	15.79	
Total	$4,021.31	$4,021.31
III.		
Expenditures During the Year		
Stock and Printing	$2,955.00	
Engraving	242.35	
Mailing & Deliv. Journals	117.80	
Stationery and Editorial Supplies	65.90	
Drayage	6.00	
Total	$3,387.05	$3,387.05
IV.		
Cash on hand April 30, 1936		$1,059.51
Good accounts receivable April 30, 1936		50.25
V.		
Total available surplus April 30, 1936		$1,109.76

Since the above surplus is deemed adequate and as a gradual increase is being shown in monthly profits, the Editorial Board believes that it is now able to place the Journal on a nearly self-supporting basis by paying a portion of Miss Peggy Strawn's salary. An estimate by the Executive Secretary indicates that she spends approximately two-thirds of her time in assisting with various functions of the publication and thus, since her present compensation is $85.00 per month an amount

of $57.00 per month would seem to be properly chargeable to the Journal. If the House of Delegates desires that her salary be handled in this manner, we shall be blad to assume the above responsibility effective May 1, 1936.

The present circulation of the Journal is approximately 1800 copies per issue, which represents somewhat of an increase over last year. We are also conducting an experiment in attempting to interest nonresident physicians who hold Kansas licenses in subscriptions with the hope that a further increase in circulation may be obtained. If this is successful, there is a possibility that advertising rates can be raised, which, of course, will provide additional income.

The Editorial Board has continued its policy of defraying the costs of engravings used to illustrate articles. Although this has occasioned some additional expense, it is believed that the service is a just one and that it tends to encourage preparation of scientific material.

During last September an offer was made to the students of the University of Kansas Medical School through which they might obtain subscriptions to the Journal for the approximate cost price of fifty cents per year. To date, twenty students have responded.

A policy was instituted last December wherein complimentary copies of books received for review are loaned to members and subsequently returned for donation to the Stormont Medical Library. It is believed that this plan will permit approximately sixty books to be added each year to the above library.

Present indications are that printing costs and other overhead will remain fairly constant during the next year and there is a good possibility that the volume of advertising may be further increased. If this occurs, the Board has in mind an increase in number of pages and an addition of several new sections.

The foremost problem of the Editorial Board is the acquisition of a sufficient amount of scientific material. The fact that no state meeting is to be held this year will materially add to that problem and thus if the House of Delegates and the Council can offer assistance in that direction, their aid will be greatly appreciated.

It is our desire that the Journal shall be constantly improved and that it shall completely represent the wishes of its readers. We shall sincerely appreciate your frank criticism and suggestions toward that end.

Dr. Geo. M. Gray moved that a rising vote of thanks be extended the Editorial Board for the splendid work done during the past year, and that the report be accepted and made a matter of record. Seconded and carried.

(To be continued in the July issue)

MEDICAL LITERATURE

Edited by Will C. Menninger, M.D.

MUMPS ORCHITIS

A thorough review of the literature on mumps orchitis is presented by Stengel in regard to incidence, etiology and pathogenesis, symptoms, pathologic anatomy, diagnosis, and treatment. Conclusions reached are: (1) Mumps is a virus disease; (2) Orchitis in mumps is important because of the possibility of subsequent sterility or impotence; (3) There is a definite relation between the parotid gland and the genitals; (4) Orchitis usually follows parotitis and is more often unilateral than bilateral; (5) Orchitis is probably a hematogenous metastasis; (6) Orchitis is most frequent at the age of puberty; its incidence being about 18.2 per cent in a large number of cases; (7) Rise in temperature, swelling, tenderness and pain in the testicle, subsidence of fever by lysis, later variability in size of the gland are prominent symptoms of orchitis; (8) Orchitis may be complicated by meningitis and other central nervous system involvements, "atrophy" of the testis in forty to sixty per cent, or impotence and sterility; (9) The lesion in orchitis is probably a parenchymatous sclerosis; (10) Diagnosis in epidemics is easy; may be difficult in absence of epidemic or marked parotitis; (11) Prophylaxis is by prevention of the disease; treatment is purely symptomatic; and (12) Use of convalescent serum or surgical incision may give good results.

Stengle, Alfred, Jr.: Mumps Orchitis, American Journal of the Medical Sciences 191:340–356, March 1936.

ABDOMINAL DISTENTION IN LOBAR PNEUMONIA

Since Goldman and Cohen conclude that abdominal distention is the commonest complication in lobar pneumonia and a contributory factor, when extreme, in the mortality rate, they describe a procedure for rectal suction siphonage which has proved to be a safe, inexpensive, and effective method of relieving this distention in their patients. The apparatus used is similar to that used for nasal catheter suction siphonage except that a soft rubber rectal tube has been substituted for the Levin duodenal tube. The patient is given cleansing soap suds enemas until the return flow is fairly clear (usually one or two.) A liquid stool is obtained by giving the patient daily one ounce of saturated magnesium sulphate solution; when the liquid stool is obtained, the dosage may be reduced. A soft rubber rectal tube, lubricated with vaseline or an astringent

rectal jelly, is inserted from two to three inches into the rectum; if the tube is forced farther it will coil on itself, balloon out the rectum, and give the patient a false rectal impulse. The apparatus consists of two bottles of four liter capacity—one hung inverted from an irrigation standard, the other set on the floor. A two-holed rubber stopper with two glass tubes, one short (about four inches) and the other long enough (about forteen inches) to extend almost to the bottom of the inverted bottle, fits into the mouth of the inverted bottle. The longer glass is connected to the rectal tube by a rubber tube and the shorter one, by the same means, to the bottle on the floor. Both tubings are clamped off. Enough water is placed in the floor bottle to cover the tube well. The clamps on the tubing are then removed while a finger is held over the end which will later be attached to the rectal tube. If suction is not immediately felt, there is air in the tubing leading to the lower bottle which can easily be removed by injecting a few cubic centimeters of water with a syringe into the tube which is connected to the longer glass tube. When suction is perceived, the tube is connected with the rectal tube. There is no danger of dehydration as long as the urinary output remains from 800 to 1200 c.c. daily or better. The tubes must be irrigated at least every four hours by forcing fluid through them and thoroughly cleaned or replaced when they are blocked by fecal masses. This procedure is used only as long as is necessary to reduce the distention and may be repeated if distention recurs. Most of the cases were controlled within twenty-four hours.

Goldman, Joel and Cohen, Abraham: Abdominal Distention in Lobar Pneumonia. Annals of Internal Medicine 9:1222–1231, March 1936.

BROMIDE ACTION IN EPILEPSY

A study of the response to bromide therapy of seventy-two patients with epilepsy lead Boshes to experimental studies with rabbits herein reported. It was concluded that epileptic seizures, induced in rabbits with two per cent thujone in six per cent gum acacia, can be ameliorated or prevented by feeding sodium bromide to a point where certain blood concentrations are attained. In rabbits large accumulations of sodium bromide in the blood cause no alteration in the total blood halides. Bromides replace chlorides ion for ion and vice versa. In bromized rabbits the brain bromide concentration is very small, particularly in cases where the animal has been well exanguinated, and bears no constant relationship to blood bromide level. A hypochloremic state does not prevent induced thujone seizures in rabbits. The chloride ion has no convulsant action and the anti-convulsant effect of bromides is a bromide-ion action.

Boshes, Benjamin: A Study of the Action of Bromides in Clinical and Experimental Epilepsy. Journal of Nervous and Mental Disease 83:390–404, April 1936.

ENDROCRINE DIAGNOSIS AND TREATMENT

According to Hutton, the following conditions should lead to an endocrine examination: (1) Cases in which the diagnosis is uncertain and unsupported by clinical and laboratory data; (2) Cases in which the diagnosis seems correct but in which the indicated treatment fails to produce the expected results; (3) Every case of neurasthenia and nervousness and cases in which there is uncertainty as to the presence of Graves' disease; (4) Growth deficiencies; (5) Genital hypoplasia; (6) Menstrual disorders not clearly due to local pathology in the pelvis; (7) Headaches; (8) Obesity; (9) Certain bone conditions, such as cysts, decalcification, slipping of the epiphyses, and fractures that fail to unite; (10) Diabetes mellitus; (11) Essential hypertension; and (12) Patients who complain of mental or physical retardation, loss of memory and lack of concentration. The diagnosis of endocrinopathies should be based on the exclusion of nonendocrine conditions; a detailed history of the patient's complaints, development, menstruation, and height and weight of relatives; a routine physical examination with particular attention paid to stature and proportion of measurements; and laboratory examination and tests if necessary. New therapeutic agents mentioned and discussed by Hutton are the parathyroid hormone, the hormone of the adrenal cortex, an insulin-free extract of the pancreas, which is useful in the treatment of angina pectoris, the sex hormone of the anterior lobe, diathermy, the ovarian hormone, and the roentgen ray.

Hutton, James H.: Recent Advances in Endocrine Diagnosis and Treatment. Journal of Laboratory and Clinical Medicine 21:736–742, April 1936.

NEWS NOTES

SOCIAL SECURITY ACT

There is published elsewhere in this issue a description by Dr. Earle G. Brown, Secretary of the Kansas State Board of Health, of the Kansas plan for the Social Security Act. A suggestion is made that every member carefully read this article. The Medical Economics Committee is also preparing a summary of the application of the Act in Kansas which will be available to all county medical societies in the near future.

ANNUAL MEETING

Major actions of the meeting of the House of Delegates and the meeting of the Council held in Kansas City, Kansas on May 11 are as follows:

Dr. J. F. Gsell, Wichita, was elected President-elect for 1936-1937 and President for 1937-1938; Dr. N. E. Melencamp, Dodge City, as first Vice-president; Dr. Geo. W. Davis, Ottawa, as second Vice-president; and Dr. Geo. M. Gray, Kansas City, was re-elected, Treasurer. No election was necessary for the office of Secretary, inasmuch as Dr. H. L. Chambers was elected for a term of three years at the 1935 annual session.

Dr. L. S. Nelson, Salina was elected as Councilor for the Eighth district in the place of Dr. Alfred O'Donnell who has served the maximum period of two consecutive terms. Dr. F. R. Croson, Clay Center was chosen to replace Dr. C. C. Stillman, Morganville as Councilor of the Seventh district, who also has completed two terms. Dr. R. T. Nichols, Hiawatha, and Dr. L. F. Barney, Kansas City, were re-elected respectively to fill second terms in the First and Second districts.

Dr. O. P. Davis, Topeka, was continued as a member of the Defense Board and Dr. L. S. Nelson, Salina, was elected to the vacancy occasioned by the expiration of Dr. E. C. Duncan's term on the same Board.

Dr. W. M. Mills, Topeka, and Dr. L. R. Pyle, Topeka, were appointed as members of the Editorial Board for terms of three years each, and Dr. R. B. Stewart, Topeka, and Dr. F. C. Taggart, Topeka, for terms of two years each. Instruction was also given that the above members shall select the fifth member of the Editorial Board provided by the new Constitution and By-Laws. Dr. Mills was retained as Editor of the Journal.

Decision was made that the next annual session shall be held at Topeka on May 3, 4, 5, 6, 1937 and Shawnee County Medical Society was asked to assume responsibility for completion of arrangements.

The Constitution and By-Laws submitted by the Committee on Revision of Constitution and By-Laws was approved with several amendments and became operative at the close of the above meeting.

A motion was approved wherein annual dues will not be established in varying amounts each year but will continue regularly at $10.00 per member until occasions arise necessitating revision.

Official county medical society charters were authorized for Osage and Wabaunsee counties.

The House of Delegates meeting was attended by approximately 125 members which was deemed particularly successful considering the fact that the event was not held at a regular annual session and although available time and a large agenda handicapped procedure a large amount of business was excellently transacted.

TUBERCULOSIS CONFERENCE

Representatives of the Kansas State Board of Health, The Kansas Tuberculosis and Health Association, The Kansas Tuberculosis Sanatorium and the Society attended a tuberculosis conference in Topeka on May 26. The meeting was called by Dr. C. H. Lerrigo, of the Kansas Tuberculosis and Health Association for the purpose of discussing ways and means wherein the four agencies of the state most interested in this problem could better unify and coordinate their efforts.

Foremost action of the meeting was the approval of a suggestion that the Society appoint a Committee on Control of Tuberculosis which would offer its services in an advisory capacity to the various groups engaged in tuberculosis activity and which would attempt to interest the county medical societies in state wide programs on this subject.

Dr. Lerrigo stated at the conference that he had long desired to see an arrangement of this kind perfected and that in his opinion unified organization through the medium of the Society and the county medical societies would do more to promote an efficient tuberculosis program than any other factor.

Appointments made to date on the above Committee are as follows: Chairman, ex-officio, Dr. H. L. Snyder, Winfield; Vice-chairman, Dr. C. F. Taylor, Norton; Dr. C. H. Lerrigo, Topeka; Dr. Earle G. Brown, Topeka; Dr. H. L. Chambers, Lawrence; Dr. Harold H. Jones, Winfield and Dr. F. L. Loveland, Topeka.

A first meeting of the Committee is planned in June for discussion and organization of activity for the next year.

MEMBERSHIP

As is shown in the report of the Secretary contained in the House of Delegates proceedings the Society has accomplished two membership records during the present year. One of these pertains to county medical society membership which at the date of the annual meeting totaled 1440 members and the other relates to fellowship in the American Medical Association which totaled slightly more than 1000 at the same date.

The fellowship figure establishes an all time record for the Society and the county medical society membership is the greatest ever shown at the date of an annual session.

MATERNAL AND CHILD WELFARE COMMITTEE

By reason of the many activities to be accomplished in the field of maternal welfare and child health under the Social Security Act, Dr. H. L. Snyder, recently increased the membership of the Society Committee on

Maternal and Child Welfare to provide a larger working group in that interest. The new members added are as follows: Dr. J. D. Clark, Wichita; Dr. Clay E. Coburn, Kansas City; Dr. Harry Davis, Topeka; and Dr. T. J. Sims, Kansas City.

A joint meeting between this Committee, Dr. Earle G. Brown, Secretary of the Kansas State Board of Health, and representatives of other groups interested in the Social Security Act was held in Topeka on May 29 and plans were completed for the assistance to be offered by the Society in this behalf.

WPA MEDICAL HISTORY

The National Writers' Project in Kansas commenced activity on approximately May 1 toward completion of the Kansas Medical History described in preceding issues of the Journal.

Representatives of this group are at the present time interviewing physicians in all parts of the state and engaging in research at various state archives in the interest of assembling all available historical information on this subject. The Society Committee on Medical History is particularly anxious that these interviewers be extended all possible assistance and cooperation.

LIASON COMMITTEES

Following conferences between the Kansas State Board of Health and Dr. H. L. Snyder, a bulletin will be issued in the near future to the county medical societies requesting the establishment of a committee in each county to serve as a liason committee with the State Board of Health. The purpose of these committees is to aid in the further coordination of the activties of the State Board of Health in all phases relating to public health and such other matters as come under its jurisdiction.

NEW STATE LABORATORY

Through financial assistance received from the Social Security Act, the Kansas State Board of Health has recently established an additional state laboratory in Parsons to serve southeast Kansas. A letter of announcement issued to physicians in that area reads as follows:

May 9, 1936.

"The Kansas State Board of Health has established a district laboratory at Parsons. The laboratory is located in the hospital building on the grounds of the Parsons State Hospital.

The laboratory is equipped to make various types of tests relating to the diagnosis and control of the acute infectious diseases except serological examinations for syphilis. Blood specimens or spinal fluids for Wassermann or Kahn tests should be sent to the central laboratory in Rice Hall, Washburn College, Topeka.

Raymond E. Leach, a graduate of the University of Kansas and for the past six years in the central laboratory at Topeka, will be the bacteriologist in charge of the district laboratory. He will be pleased with the opportunity to render you prompt and efficient service.

The laboratory has telephone service, and the post office box number is 647.

The laboratory has been established with the idea that more prompt service can be secured by the physicians in southeast Kansas, and it is hoped you will make use of its services. You are, of course, invited to call and inspect the laboratory and make the acquaintance of Mr. Leach at any time you are in Parsons.

Very respectfully,
Earle G. Brown, M.D.,
Secretary and Executive Officer."

SOCIAL LEGISLATION

The Kansas Association for Social Legislation, a group composed of social workers and various social agencies, met in Topeka recently to consider a proposed legislative enactment for establishment of state and local public welfare boards. It is planned that these boards would supervise Kansas old age pensions, unemployment insurance, aid to dependent children and other functions under the Social Security Act.

Representatives of the Society who attended the meeting found that certain medical and public health activities had been included in the proposed act. After several conferences with officials of the organization, an agreement was reached that these activities should be amended out of the bill.

WPA NURSERY SCHOOLS

The following bulletin was forwarded to the secretaries and presidents of county medical societies on May 4, 1936:

As you possibly know, the Kansas WPA has under its direction a Nursery School Project, sponsored by the State Department of Public Instruction, wherein nursery schools are established for the benefit of children of relief and similar low income families. These schools, which are locally supervised by a head teacher and which usually have a registered nurse as a staff member, are now being operated at the following places in the state:

Sublette	Frontenac	Abilene
Atchison	Girard	Herington
Lawrence	Pittsburg	Manhattan
Valley Falls	Parsons	Wichita
Leavenworth	Cherryvale	Wellington
Topeka	Fredonia	Logan
Kansas City	Neosho Falls	Phillipsburg
Galena	Yates Center	Goodland
Arma	Concordia	Satanta

The federal funds provided for this purpose do not include medical attention but certain medical supplies may be furnished on requisitions for materials and supplies. However, since the WPA does not desire that these supplies shall be administered without proper medical diagnosis, an arrangement has been approved wherein each county medical society in a county where one of these schools is located may, if it desires, appoint an advisory committee to supervise and approve all functions of that nursery school which relate to health and medical attention.

It is mutually understood and desired that all forms of treatment and examination shall be left entirely to the

various family physicians of the children enrolled in the schools. Thus, it should be made clear that the advisory committee, if utilized, would not be expected to serve in this manner.

Other parts of the agreement with the Kansas WPA are as follows: The State Supervisor will require that lists of medical supplies requested by a head teacher shall bear the approval of the advisory committee of the county medical society where that particular school is located. Suggestions and instructions may also be given toward preventing the spread of contagious diseases and for all other matters of public health. Likewise, a child may be dismissed from school upon suspicion of symptoms suggesting a contagious disease and will not be readmitted until a certificate has been obtained from a physician. Certificates of this kind will be honored only when signed by a licensed doctor of medicine.

The Kansas WPA is also interested in providing the children enrolled in these schools with certain types of immunization and with thorough physical examinations. Representatives of this Committee are now holding conferences in the interest of attempting to develop a program of this kind under the Social Security Act, and additional information will probably be bulletinized on that subject in the near future.

As stated above, the agreement with the WPA purports only to make available these arrangements if they are desired by your county medical society. Thus, if your group is interested, the nurses and teachers in charge of the local projects will be glad to cooperate in any way desired.

Maternal and Child Welfare Committee,
John L. Grove, M.D., Chairman.

HONORARY MEETINGS

Meetings honoring Dr. A. J. Anderson, Lawrence, Dr. W. E. Ham, Beattie, Dr. Robert Hawkins, Marysville, Dr. F. E. Schenck, Burlingame, and Dr. Charles M. Stemen, Kansas City, were held recently by the county medical societies of their membership.

Dr. Anderson was the guest of honor at a dinner-meeting of the Douglas County Medical Society held in Lawrence on May 7 to celebrate his fiftieth year in practice. Judge Hugh Means, Lawrence, spoke on "Some Medical-Legal Aspects of Practice" and Dr. Anderson was presented with a silver placque upon which the following was inscribed: "A. J. Anderson, M. D.—1886-1936—Fifty Years a Benefactor to Lawrence, Kansas."

The Marshall County Medical Society held a special meeting at the home of Dr. J. W. Randell on April 23 to honor Dr. Ham's and Dr. Hawkins' long years of service to the public and profession. Dr. Floyd Spencer, Dr. H. E. Peterson, Dr. E. M. Shores, and Dr. Jacob Kulowski, all of St. Joseph, spoke on subjects relating to tuberculosis.

Dr. Schenck's fifty-four years of practice were honored by the Osage County Medical Society at a banquet given by that society in Burlingame on April 16. Dr. J. L. Lattimore, Topeka, paid tribute to Dr. Schenck and presented him with a certificate of honorary membership. Dr. Fred Angle, Kansas City, also spoke on "Malta Fever."

The members of the Wyandotte County Medical Society attended a dinner-dance in Kansas City on May 26 which was given in honor of Dr. Stemen's fiftieth anniversary in the practice of medicine.

COUNTY SOCIETIES

Dr. L. C. Edmonds, Horton, was elected president of the Brown County Medical Society to fill the unexpired term occasioned by Dr. W. G. Emery's removal to Leavenworth, at a meeting of that society held on May 1 in Hiawatha.

The Cloud County Medical Society held a luncheon meeting on May 1 to elect officers for the coming year. Those elected are as follows: Dr. Frank Kinnamon, president; Dr. C. D. Koser, vice-president; Dr. J. M. Porter, secretary-treasurer, all of Concordia. Sixteen members were present at the meeting.

Members of the Dickinson County Medical Society were guests of the physicians of Hope at a dinner-meeting on April 23.

The Greenwood County Medical Society met in Eureka on May 6. Principal speaker on the program was Dr. John Kleinheksel, Wichita, who spoke on "Diabetes in Pregnancy," and "Diabetes as Associated with Hardening of the Arteries."

A meeting of the Marion County Medical Society in Marion on May 6 followed a dinner at the Elgin Hotel. Dr. W. M. Tate, Peabody, spoke on "Leukemia with its Nervous Manifestations," and Dr. A. C. Eitzen, Hillsboro, discussed "Epidemic Encephalitis."

The Northwest Kansas Medical Society held a meeting on April 30 in Norton. Sixteen members and fourteen visitors were present. Officers elected for the coming year are as follows: Dr. Philip Cohn, Norton, president; Dr. Edw. F. Steichen, Lenora, first vice-president; Dr. G. W. Hammell, Hoxie, second vice-president; and Dr. C. F. Taylor, Norton, secretary-treasurer. Dr. D. V. Conwell, Halstead, gave a paper on "Organic Psychosis." Dr. C. F. Taylor, Norton, gave a brief resume of his visit to the Leper Colony at Carville, Louisiana, illustrating his talk with films.

A meeting of the Osage County Medical Society was held in Alta Vista on May 29. Dr. L. V. Dawson, Ottawa, spoke on medical economic subjects.

Dr. J. F. Gsell, Wichita, and Dr. C. F. Hinshaw, Wichita, were the guest speakers at a meeting of the Pratt County Medical Society held in Pratt on April 24. Dr. Gsell spoke on "Foreign Body Conditions of Ear, Eye, Nose and Throat" and Dr. Hinshaw, spoke on "Scarlet Fever."

A joint meeting of the Sumner County Medical Society and the Sumner County Dental Society was held on May 28 in Wellington. Dr. Ferdinand C. Helwig, Kansas City, Missouri, assisted by Dr. Boyd S. Gardner, discussed treatment of Vincent's agina by electro-coagulation.

A meeting of the Wyandotte County Medical Society was held in Kansas City on May 6. The following speakers and respective subjects were presented: Dr. H. R. Wahl, "Pathological Conference"; Dr. C. A. Gripkey "Post Operative Complications Following Thyroidectomy"; Dr. D. C. Peete, "Differential Diagnosis in Myocardial Diseases". Another meeting of the society was held on May 26 to honor Dr. C. M. Stemen, who celebrated his fiftieth anniversary in practice.

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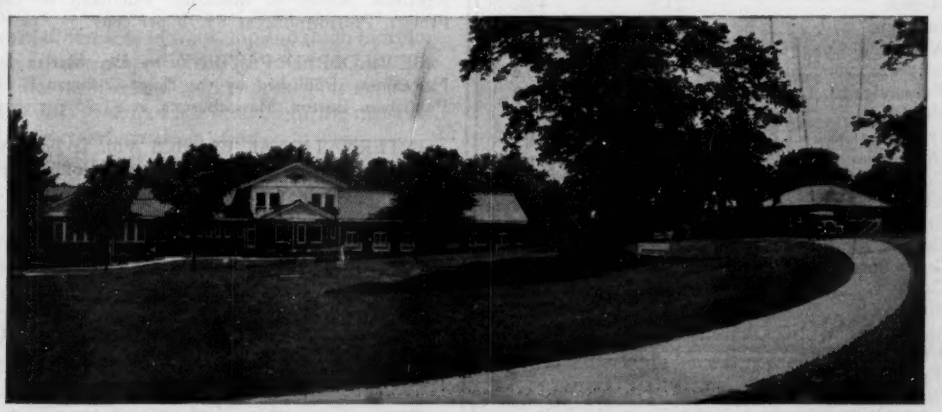

OAKWOOD SANITARIUM

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T. N. NEESE Business Manager
DAISY N. NEESE Superintendent

MEMBERS

Dr. T. R. Hyatt, Topeka, has filed as a candidate for the Republican nomination for county commissioner in Shawnee County.

Dr. O. E. Stevenson, Oswego, was elected president of the Kansas Health Officers and Nurses Association at a meeting held in Topeka in April.

Dr. C. F. Menninger, Topeka, was recently elected to membership in the American Psychiatric Association.

Dr. A. F. Rossitto, Whitewater, left for Chicago during the first part of May to enroll in a post-graduate course in radiology.

Dr. H. L. Snyder, Winfield, and Dr. James M. Scott, Topeka, accompanied the Kansas official representatives to the Republican convention in Cleveland.

Mac Cahal, Executive Secretary of the Sedgwick County Medical Society presented a paper on "Organized Medicine and Legislation" at the Conference of Executive Secretaries held in connection with the Kansas City meeting of the American Medical Association.

MORBIDITY REPORT

New communicable disease cases in the state as compared with last month are reported by the Kansas State Board of Health as follows:

Disease	Month ending May 23	Month ending April 25
Scarlet Fever	1148	1881
Chickenpox	323	726
Pneumonia	250	637
Mumps	232	458
Smallpox	143	157
Whooping Cough	142	162
Influenza	94	334
Tuberculosis	62	70
Measles	60	79
Syphilis	53	101
Diphtheria	52	63
Gonorrhea	28	70
Vincent's Angina	20	40
Erysipelas	18	32
German Measles	12	10
Septic Sore Throat	9	17
Cancer	5	5
Pink-eye	5	4
Meningitis	4	9
Undulant Fever	4	4
Typhoid Fever	4	4
Poliomyelitis	2	0

DEATH NOTICES

Dr. William Kermott Johnson, 79 years of age, of Garnett, died at the University of Kansas Hospital, Kansas City, on April 30. He was born in Almond, Alleghany County, New York in 1856 and had been a physician in Garnett since 1918. He received his medical training at the Keokuk Medical College, Keokuk, Iowa, and graduated from there in 1891. He was a member of the Anderson County Medical Society.

Dr. Stewart McKee, 75 years of age, died in Leavenworth on May 5. He was born in 1860 and attended the Iowa and Harvard Medical Schools for his medical training. He was licensed to practice in 1901. He had practiced in Leavenworth for thirty-seven years. He served fourteen years as physician for the county and city and was surgeon at the federal prison from 1914 to 1926. He was a member of the Leavenworth County Medical Society.

Dr. Julius Wesselowski, 78 years of age, died at his home in Jewell City, on April 17. He was born in Hamburg, Germany, in 1858. He came to America in 1876, and established his practice in Jewell City eleven years later. He practiced in that town for sixteen years and then went to Oklahoma territory and later Kansas City. He returned to Jewell City in 1909 and spent the remaining years of life there. He obtained his medical education in Germany, New York and Kansas City. He was an honorary member of the Jewell County Medical Society.

NEW BOOKS RECEIVED

RECENT ADVANCES IN MEDICINE, by G. E. Beaumont, M.D., Middlesex Hospital, London and E. C. Dodds, M.D., professor of biochemistry, at the University of London. Published by P. Blakiston's Sons & Company, Inc., Philadelphia, at $5.00 per copy.

ROENTGENOGRAPHIC TECHNIQUE, Second Edition Revised, by Dr. Darmon A. Rhinehart, professor of roentgenology and applied anatomy, University of Arkansas, School of Medicine. Published by Lea & Febiger, Philadelphia, at $5.50 per copy.

BEWILDERED PATIENT by Dr. Marian Staats Newcomer. Published by the Hale, Cushman & Flint, Publishers, Boston, Massachusetts, at $1.75 per copy.

INTERNATIONAL CLINICS Vol. II Forty-Sixth Edition, edited by Dr. Louis Hamman, Johns Hopkins Hospital Baltimore, Maryland. Published by J. B. Lippincott Company, Philadelphia.

BOOK REVIEWS

OBJECTIVE AND EXPERIMENTAL PSYCHIATRY by D. Ewen Cameron, M.B., Macmillan Co., New York, 264 pages, $3.00.

This author presents a collection of data on what he calls "objective" psychiatry. It is chiefly a none-too-complete review of the literature covering the laboratory investigations in mental illnesses. While there is an occasional reference to some of his own published work, most of the material is a collection of the work of other investigators summarized but not evaluated. He decries the "purely observational method" in psychiatry and prefers the statistical approach. One of his chapters is devoted to statistics and another to statistical methods. His style is somewhat obscure, particularly the first two chapters, and he makes the error of placing too much emphasis on diagnostic categories. He covers such fields as heredity, conditioned reflex, blood sugar tests, respiration, basal metabolism, and blood pressure.

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The book is helpful in that it does summarize the work in these various fields and gives an investigator sufficient data to orient himself as to what has been done. There is a good bibliography and a good index.

William C. Menninger, M.D.

THE HUMAN FOOT. By Dudley J. Morton, M.D., New York, The Columbia University Press, 1935. Price $3.00.

This is probably one of the most scholarly presentations on this subject in recent times. It includes much of the work the author has been carrying out on this subject for many years. He considers the evolutionary development of the human foot, beginning at the very origin of life and tracing it thru the earliest fishes, the amphibian, reptilian, mammalian and early primate forms of life. The pro-anthropoid and anthropoid changes are fully considered, and this is followed with the terrestrial modifications of the gorilla and early pre-human feet. These studies form a most excellent basis for the understanding of the morphological features of the human foot.

The second portion of the text deals with the physiology of the human foot, with full consideration of static and dynamic factors. The relationship of the line of gravity is first considered and this is followed with a consideration of the foot balance in stance and in locomotion. These studies are based not only upon the foregoing considerations but also upon experimental examinations of living beings, both among African natives, and individuals living in modern civilized communities.

The third portion of the book deals with a consideration of the functional disorders of the human foot. As a result of the foregoing chapters and the clinical examination of patients with foot disorders, he has considered the primary factors in the etiology of certain foot disorders as being due to certain underlying abnormalities. These are the shortness of the first metatarsal bone, with abnormal dorsal hypermobility of the first metatarsal segment which includes the tarso-metatarsal joints; the abnormal load thereby forced on the second metatarsal bone as a result of which there is hypertrophy of same; posterior location of the sesamoid bones. The author places more importance on these anatomic-pathological factors than upon muscular weakness. He does place importance on shortened calf muscles and relative disturbance in the pronation-supination power of the foot. He presents the findings in about 150 cases collected for analysis, from the New Haven Hospital records, and carefully considers his method of estimating and measuring his findings.

Finally, the author very briefly considers the therapeutic management of these cases, basing his treatment on the etiological factors already considered. All in all it is a most excellent presentation. He does depart from the usual path taken by most investigators of the subject but he presents his case with remarkable clearness. Although it does seem that the author but covers a certain portion of the cases, it will certainly form a most valuable addition to the already exhaustive literature on the subject.

M. E. Pusitz, M.D.

AUXILIARY

PRESIDENT'S MESSAGE

Dear Auxiliary Members:

It was a privilege and an inspiration to attend the fourteenth annual meeting of the Woman's Auxiliary to the American Medical Association, held in Kansas City, Missouri, May 11, to 15, I was very glad such a large delegation from Kansas attended.

Our national president, Mrs. Robert Fitzgerald, has requested that the state cooperate with the national officers and standing committees by contacting them to assure us a clearer vision of the national organization.

I wish each auxiliary member a pleasant vacation.

Mrs. L. B. Gloyne.

ANNUAL REPORT FOR 1935-36 OF THE KANSAS MEDICAL AUXILIARY

Looking back in contemplation of the accomplishments of a year's work, I find it far short of the plans for achievement that I entertained at the beginning of the year. I have enjoyed very much my work and associations with the officers and members of the Kansas Medical Auxiliary and feel that we have made some advancement in auxiliary work in ever-increasing interest and friendships that have been made. The members of the executive board have been splendid in their work and their response to my requests.

Though our membership shows a decline, it is through tardiness in making returns to our state treasurer, who has been untiring in her efforts to bring Kansas dues in promptly. Later reports brought our membership to 244.

Organization work shows small returns on great effort expended. Since we must have an invitation for organization through the Medical Society, we must await the pleasure of the men, most of whom have ignored all organization correspondence. However, we have one new county that organized in September, but due to the serious illness of their president, their work was never begun. Another county has all plans made for organization in the fall and have elected their temporary chairman.

Our state has had as an incentive this year, the national meeting in Kansas City, and our plans have been to gain all possible information and enthusiasm from our sister organizations. It has proved something definite and worthwhile for which to work.

The Kansas Medical Society through its Executive Secretary prepared large packets of material explaining fully "Socialized Medicine." The packets were distributed through the auxiliaries and all high schools of the state, that authentic material might be available to schools and clubs for debate and study.

A cancer control program, with national speakers, was held over the state during the last week of March. Five districts of the state were visited and meetings held so that all parts of the state might have opportunity to attend. Two meetings were held in each place, a scientific meeting in the afternoon and a public meeting at night.

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The Advisory Council and the Executive Board of the Auxiliary met in Wichita March 31 to discuss plans for a program to be incorporated in the work of the auxiliary next year. That is counted as one of the outstanding gains that our Medical Society has recognized us as capable and has shown interest to outline a definite work to be accomplished by us. We are very grateful to The Journal of the Kansas Medical Society for the space furnished us for reporting our activities.

Questionnaires were sent out from the Society central office and returned there to be kept on file for the purpose of determining the outside contacts of our auxiliary members in civic, health, church, school, and study groups.

As president, I received invitations from and visited three of the county auxiliaries. One other invitation could not be accepted at that time because of home duties.

Reports from all auxiliaries have been good, showing fine work being done. Three counties report only social activities but feel that as their organizations attain age and friendships are strengthened they can attempt more definite aims. All auxiliaries report at least one meeting with their county medical society. Most of them have studied the contemplated Basic Science Law and the material on socialized medicine.

The radio broadcasts of the American Medical Association have been enjoyed and reports received of notices published for the public.

One county solicited their newspapers and received promises from three to print articles from the clip sheets of "Hygeia." "Hygeia" subscriptions have been given to several schools and exhibits and posters for "Hygeia" featured.

One county auxiliary sponsored a crippled girl, helping her secure funds for a musical education, and another auxiliary is building a loan fund for medical students.

Mrs. Gloyne, our new President for 1936-37 is vitally interested in auxiliary work and is planning many things for us.

(This report was prepared and mailed in April to be filed with National officers as required and was read May 13 before the general session of the Woman's Auxiliary to the American Medical Association.

Our state meeting was held, May 10, at the Gould Hotel, Kansas City, Kansas. The Executive Board met at 10:30 a.m. with five officers, six committee chairmen, and six past presidents present.

Mrs. Rogers N. Herbert, National Auxiliary President; Mrs. Herbert L. Mantz, General Chairman of Convention; and Mrs. J. H. Crampton, State President of the Idaho Auxiliary were our guests at luncheon served at 12:30. Mrs. Herbert gave us a most interesting talk bringing us the plans and purposes of the Woman's Auxiliary. She is a charming and gracious person with an infectious enthusiasm for Auxiliary work.

At 1:30 p.m. we held our general session with interesting reports from each county auxiliary, report of nominating committee, election and installation of new officers.

Our hostesses, the ladies of Wyandotte County Auxiliary entertained us at 4:30 p.m. with a most enjoyable musical program and tea. The sincere thanks of the Kansas Medical Auxiliary goes to these lovely hostesses for their kindness to us all.

May I take this opportunity to thank my Executive Board, county presidents and all auxiliary members for their loyal support during my year as President of the Kansas Medical Auxiliary. I appreciate the honor you bestowed upon me and may I bespeak for my successor, Mrs. L. B. Gloyne, the same love and kindness I have enjoyed.)

Mrs. Milton O. Nyberg,
Retiring President.

A.M.A. AUXILIARY MEETING

The Kansas Woman's Auxiliary confined the activities of their annual meeting to one day, following the example of The Kansas Medical Society.

Meeting primarily for the transaction of necessary business, the ladies of the Wyandotte County Auxiliary made the day one of pleasure, as well.

The day's activities began at the Gould Hotel at 10:00 A.M. Sunday when the Board met in formal session to receive the reports of the elective officers and standing committees.

At one o'clock a delightful luncheon arranged by the Wyandotte County Auxiliary was served at the Gould Hotel. After luncheon the delegates convened. At this meeting reports from the various county auxiliaries were read and officers for the ensuing year were elected. Names of officers are as follows: Mrs. L. B. Gloyne, president; Mrs. R. W. Urie, president-elect; Mrs. C. L. Williams, 1st vice president; Mrs. E. F. Clark, 2nd vice president; Mrs. W. H. Young, secretary; Mrs. F. E. Coffey, treasurer. Mrs. R. W. Urie and Mrs. Cyril Black were delegates to the A.M.A. meeting.

Following the delegates meeting officers, delegates and visitors were entertained at a musical tea with the Wyandotte County Auxiliary as hostesses.

At the luncheon we were honored by the presence of our National President Mrs. Rogers N. Herbert, Nashville, Tennesee, who spoke inspiringly and constructively concerning auxiliary affairs.

The rest of the week was taken up with national affairs which will be reported from national sources.

PRESIDENT'S ADDRESS

(Presented by Mrs. L. B. Gloyne, Kansas City, at the meeting of the Kansas Auxiliary on May 10.)

Members of the Kansas Medical Auxiliary, allow me to take this opportunity to express my appreciation for the confidence you have placed in me by electing me your president. I wish to compliment Mrs. Nyberg and her officers on the accomplishments made during the last year. It is with pride I mention our past presidents who through their wisdom and sacrifices have added strength and nourishment to the growth of our present auxiliary.

There never was a time in the history of medicine when there was a greater need for an intelligent, well informed, and energetic auxiliary. Truly, the methods of the practice of medicine of the past are being questioned and undoubtedly some changes are maturing. Each county auxiliary should have a definite program educating its members on the attitude of the medical profession to such problems as, socialized or state medicine, basic

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If the auxiliary expects to be the liason officer between the profession and the public, it will first be necessary for us to greatly strengthen our present number and to adopt as our goal, an auxiliary for every county society in the state. This goal would not be so difficult, if each county auxiliary would set about definitely and promptly to meet with and form an auxiliary in each county adjacent to themselves, of course it would be necessary to get the approval of the adjacent county medical society.

There are many definite activities that an auxiliary can enter into, but I believe, that these activities should be restricted in the main, to the problems before the state at this time.

The members of the auxiliary should be encouraged to accept offices in certain lay organizations such as, the parent-teachers association and study groups and, after accepting such offices, they should use their influence to spread the gospel.

One of the programs that is constantly being sponsored by the American Medical Auxiliary is to have every member of the auxiliary reading "Hygeia" and also for the members to see that this magazine has a wide circulation among the doctors, dentists, school teachers, educators and the general lay public. A more wide spread use of this magazine will help materially in educating the public on scientific medicine; and it will help the public to distinguish between a real physician and a "quack", it will help them adopt certain health habits and educate them to approve such public health principles as vaccination against smallpox and immunization against diphtheria, and it will also help in giving the public a proper understanding concerning fake and patent medicines, for which the public is annually squandering millions of dollars.

It will not be the function of the auxiliary to carry on an extensive unified program, the results of which can be tabulated and easily caculated. But rather the work must be more like that of the mothers of this country. Each member in her quiet individual way must do things that will never be charted; but the results will be just as certain, as the results that proper motherhood have on a nation.

In conclusion let me appeal to you for your most hearty cooperation during the coming year. May you always be willing to offer constructive criticism, but be sparing with any remarks which might retard the growth of our auxiliary and defeat the purpose for which we are organized.

I will at all times be sincere in what I do with a steadfastness upon which you may always rely and with a strength of character to heed and profit by your criticism.

I sincerely hope that every doctor's wife in the state of Kansas may become better acquainted with every other doctor's wife during the coming year, as this will make the solution of our problems less difficult. There is a common problem, a common ambition and a common sense of achievement in our group that should make an excellent plane on which we can meet and enjoy ourselves and in the end improve the quality of medical services given to the people of our beloved state of Kansas.

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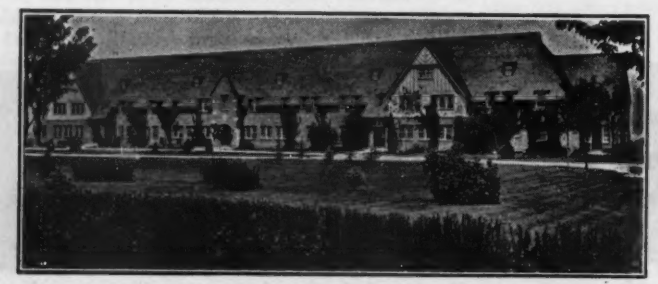

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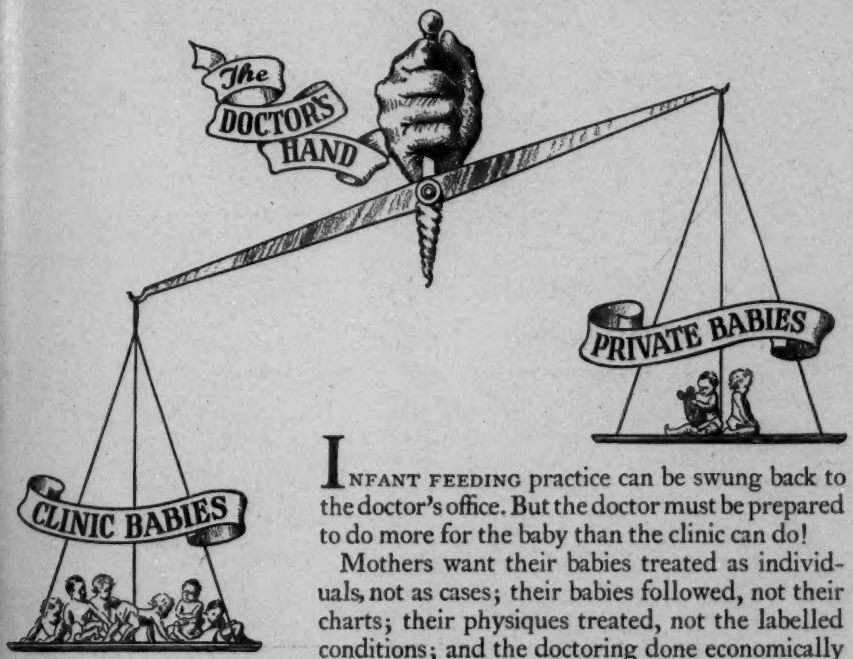

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